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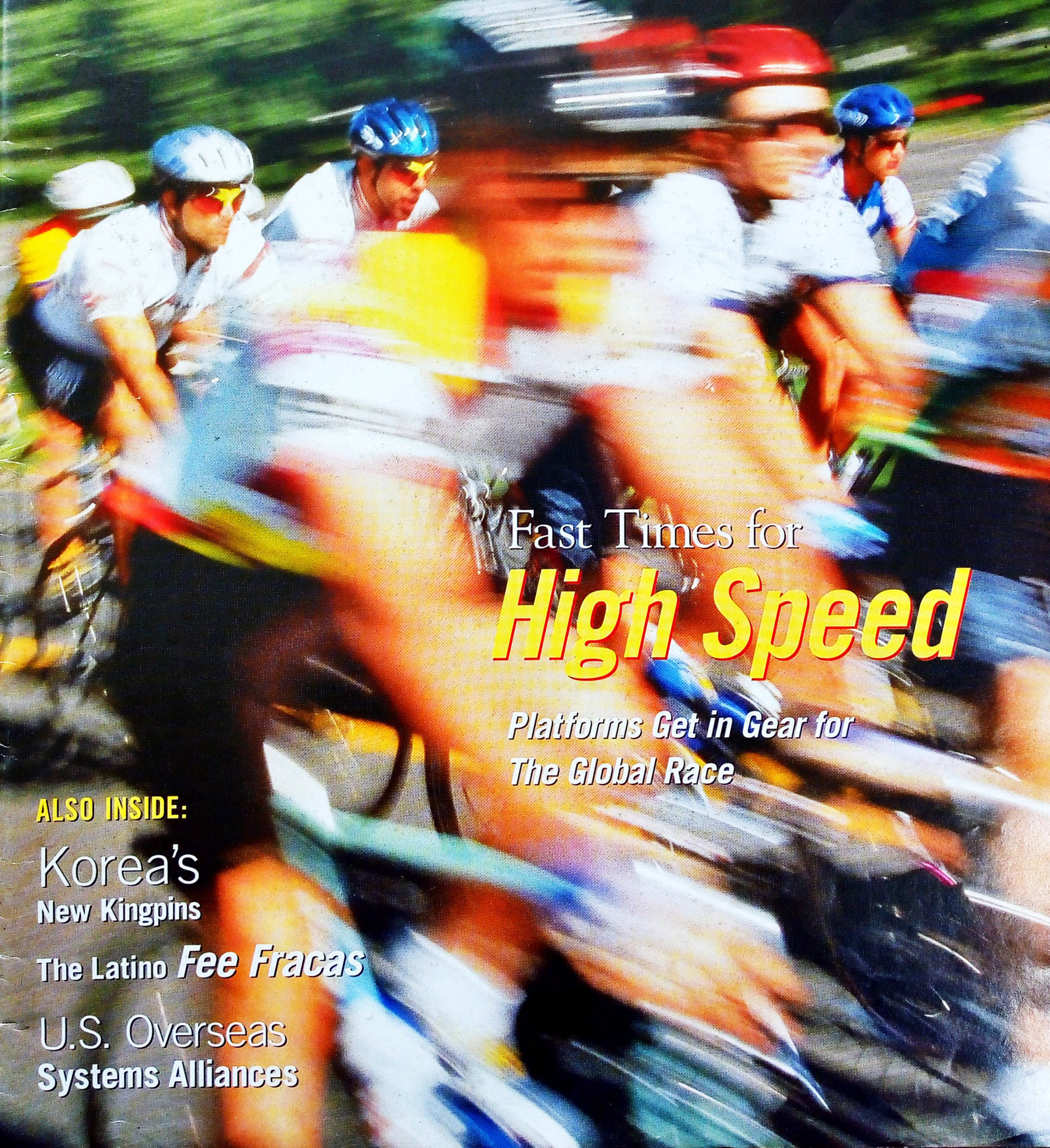

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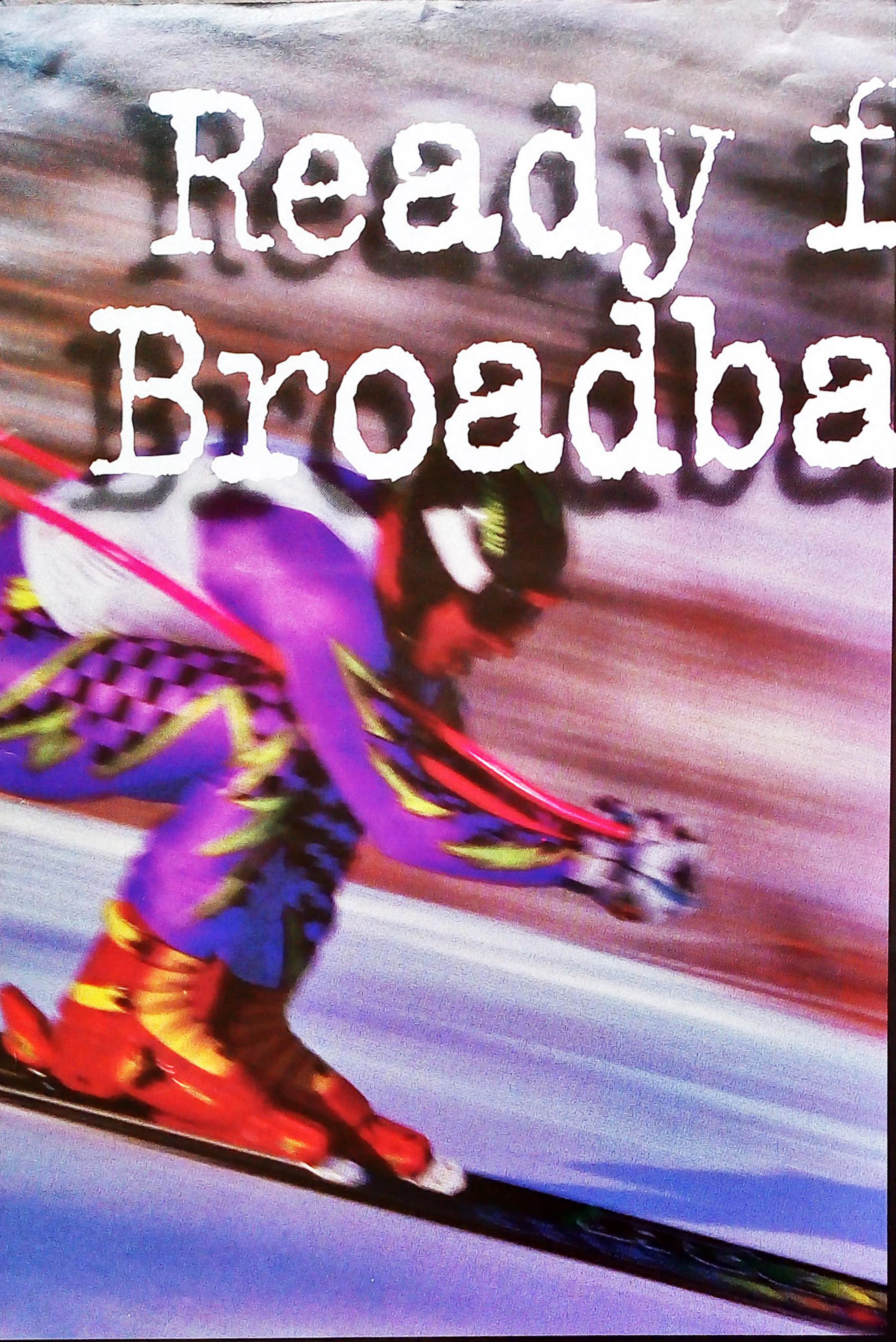

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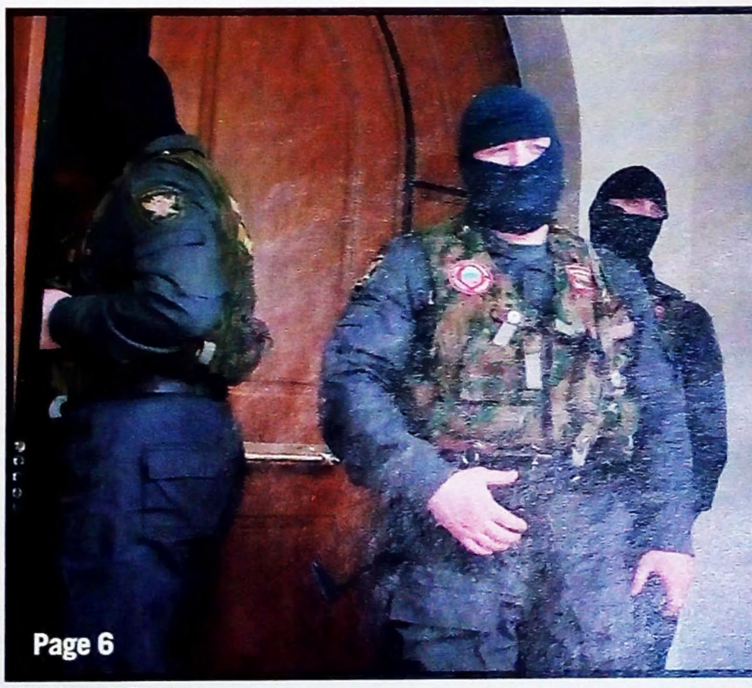
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AP/Wide World Photos

Also Inside

WORLD **WATCH**

The Karmic Boomerang

By Janet Stilson

I'm sitting here in limbo in the New Orleans airport with a good share of the attendees from the United States' National Cable Show. We're a weary, apprehensive bunch, because well over 200 flights to New York have been canceled or indefinitely postponed due to a storm. Contacts of mine from Madrid will have to limp home two days late. And the airline, Continental, refuses to provide them with hotel rooms or more than a $US10 meal voucher. Some of my magazine colleagues are camped out at my flight's gate, because the crew at their own gate is not providing them with any updated information, and my flight crew is.

The bad behavior has started me thinking about a chain reaction for our industry that was so much in evidence at the show — and which poses a bit of a threat to cable's favorite new-revenue stream.

As you may recall, the convention came directly after Time Warner Inc. was forced by the U.S. government to reinstate channels from the Walt Disney Co. on its cable systems. That was the result of months of debate over a new carriage agreement and countercharges of bad behavior.

Questionable behavior by powerful operators could impact their ability to develop a valuable new revenue stream.

In speaking at the U.S. cable show, Federal Communications Commission Chairman William Kennard suggested that the clout that Time Warner exhibited had ramifications on the long-running argument about whether or not cable operators in the U.S. should be forced to provide open access to their high-speed platforms to all Internet-service providers. That would effectively do away with the need of consumers to "buy through" a system's own service in order to subscribe to another Internet service such as Prodigy Communications Corp. Kennard maintained that the incident called into question whether operators can be "honest gatekeepers to the Internet."

What's more, it was also revealed at the show that the U.S. Antitrust Committee plans to ask the FCC and the Federal Trade Commission to examine whether Cisco Systems Inc. routers could abet another form of gate keeping. The committee claims the routers might allow a given operator to slow down access to some Web sites, and accelerate it for others. So, for example, access to a site of a Time Warner-owned channel like CNNfn could be offered at a faster speed than to that of a competing Web site owned by another company. Once again, the Time Warner/Disney battle was cited.

The U.S. certainly isn't the only country where the market power of large systems companies is hotly debated by programmers. You need only read the story in this issue on friction in Latin America to understand that. Similarly, the U.S. isn't the only place where open access to the Internet is an issue.

While I don't see a clear-cut bad guy or good guy in the market-power debates, it's clear to me that the behavior of powerful operators could weigh on their ability to develop an extremely valuable revenue stream. As a sign in my local coffee shop says, "Karma is a boomerang."

Janet Stilson

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THE WORLD'S SOURCE FOR TV AND TELECOM ANALYSIS
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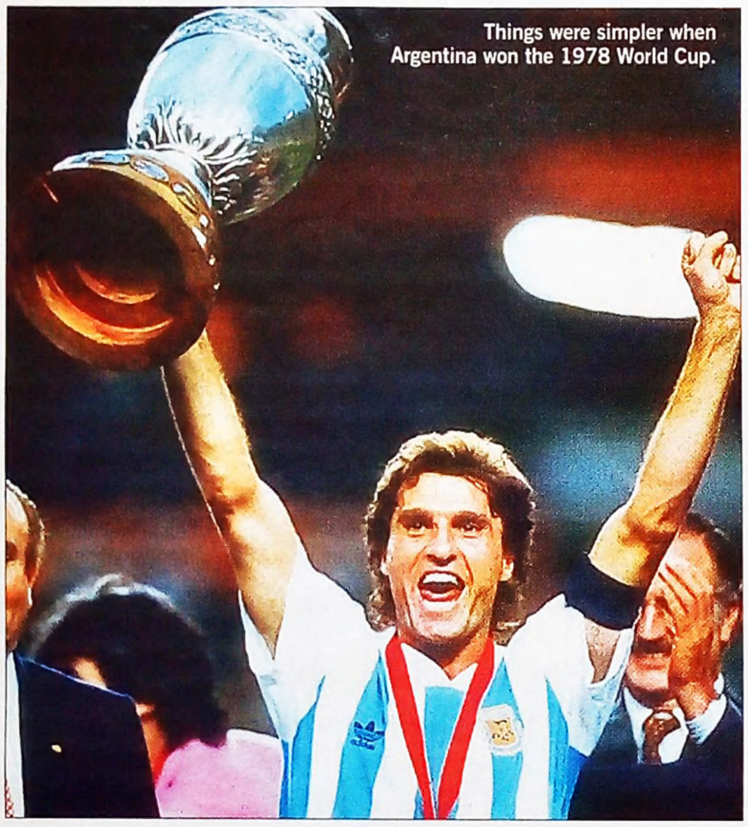

Things were simpler when Argentina won the 1978 World Cup.

Viewer Backlash In Argentina

BUENOS ARIES

BY JOSHUA GOODMAN

When a locally based cable-industry executive went out to dinner with his wife at his favorite Buenos Aires restaurant recently, he expected a quiet, relaxing meal. Instead, he received an ear-full from his usually cordial waiter. What was getting him hot under the collar was the price he had to pay to see Argentina's national soccer team in action. Lambasting his long-time patron, the starched, black-and-white-clad figure railed, "How can you take away from us one of the last popular celebrations we have left as a country?"

The waiter was referring to the $US6 per game it costs to watch 2002 World Cup qualifying matches, which today can only be seen on pay-per-view packages offered by the country's main two cable systems, Multicanal and CableVisión. It is an issue that is not only upsetting the ranks of waiters in Buenos Aires; the lower house of Congress unanimously approved a bill that would require Argentina's remaining matches against its regional rivals to be transmitted live on broadcast television.

"Demagogic" and "unconstitutional" was the industry's response to the half-sanctioned law. Luckily for the industry, though, the more cautious-minded Senate has already opted against moving forward with the bill, thus saving itself from a lengthy legal battle with some of the powerful media interests backing Argentina's two big multiple system operators (MSOs). Multicanal is majority controlled by Argentine media giant Grupo Clarín, while CableVisión is backed by the United States' Liberty Media International Inc. and Hicks, Muse, Tate & Furst Inc. (HMT&F).

However, soothing the frustrations of distressed subscribers unaccustomed to premium and pay-per-view services is a marketing nightmare not easily solved. Customers are still reeling from the shock of seeing HBO movies

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Eyes on the Money At Summit 3

NEW ORLEANS

Before this year's NCTA Cable 2000 confab in New Orleans could begin buzzing about bandwidth and emerging services, panelists from a cross-section of international companies palavered at *Multichannel News International*'s Summit 3 to discuss potential new revenue opportunities, and to explore Latin America's changing cable climate.

During one session, "New Revenue Streams," panelists revealed results from some of the world's most cutting-edge ventures. Among the panelists was James Ackerman, CEO of the interactive platform Open, backed by British Sky Broadcasting plc and British Telecommunications plc. "Our main revenue stream is being driven by e-commerce. [Open] launched in October 1999 to 1 million households. Now we're at 3 million, with 45 percent of the subscribers coming into the service at least once a week," he said.

Revenue from e-commerce, said Ashley Highfield, executive vice president and general manager of Flextech Interactive, is more than just impressive, it's explosive. That unit is part of the Flextech plc network group based in England. "We've run 10 percent revenue from e-commerce," he said. As for opportunities up ahead, "we're always on the lookout for new channel concepts, but only the channels with e-commerce elements seem attractive."

For VOD provider Future TV, the revenue potential is in advertising. "VOD gets the business going, and interactive ads are revenue spinners, but we must keep content in a neutral way to deliver to interactive subscribers," said Ricky Rand, president and CEO of Future TV.

The e-commerce play for one of Canada's largest channel groups, ChumCity, is paying off handsomely. Its MuchMusic site sold 2 million CDs in the last nine months. "That's the power of using content over Web-based services," said Jay Switzer, senior vice president and general manager of the company.

Yet the real revenue power of low-cost, mass-market interactive services is in merchandising, said Jan Steenkamp, CEO of OpenTV, which makes interactive set-top middleware. "The most powerful benefit of interactive services is to offer people a chance to purchase merchandise at the height of their emotional interest."

While the future looks bright for global interactive service providers, programmers and oper-

Continued on Page 39

Reacting to a Raid

MOSCOW

BY SARAH KARUSH

Some say last month's police raid on Media-MOST facilities was politically motivated.

AP/Wide World Photo

As an anchor began reading the news one May morning on NTV, one of Russia's three major national stations, a tinge of anxiety could be detected in his normally cool and collected voice. The day's bad news was hitting a little too close to home.

The footage of masked commandos with AK-47s was not from war-torn Chechnya that day, but from the offices of NTV's parent company in the center of Moscow.

Agents from the General Prosecutor's Office and the Federal Security Service on May 11 raided the offices of Media-MOST, the country's largest media empire. The agents conducted an all-day search of the building and held Media-MOST employees captive for several hours in the cafeteria.

The incident has alarmed free-speech watchdogs, liberal politicians and journalists not affiliated with Media-MOST. They fear that the raid, which occurred just four days after President Vladimir Putin's inauguration, may be a sign of things to come.

"It's become hard for journalists to breathe," Pavel Gusev, editor of the popular daily *Moskovsky Komsomolets*, told an estimated 2,000 people who gathered in a

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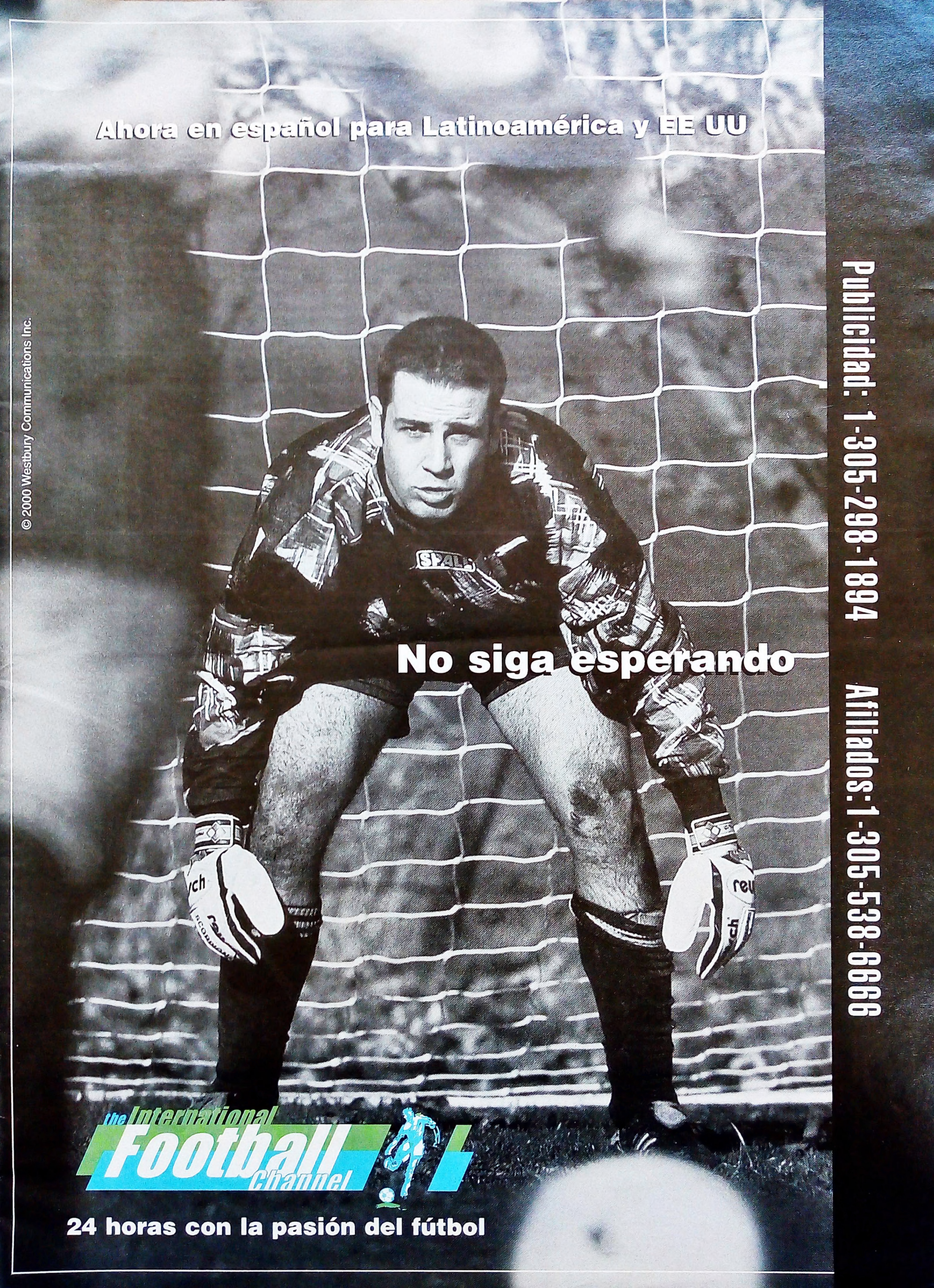
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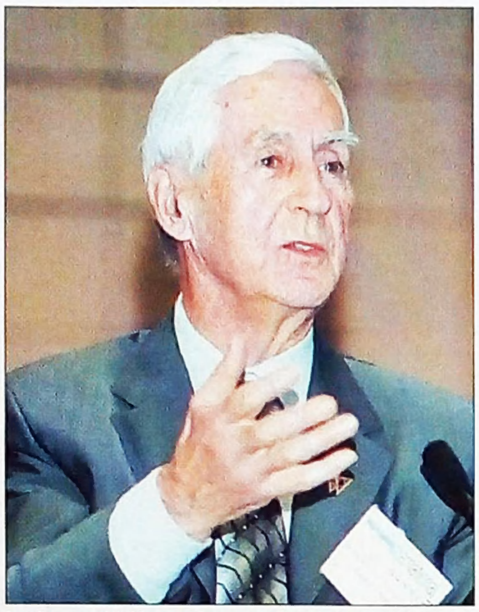
FREEZE FRAME

Spotlight on **Summit 3**

Here's look at *Multichannel News International*'s third-annual pay television conference, Summit 3, held in New Orleans last month in conjunction with the United States' National Show. Coverage of the event can be found on page 6.


Le Groupe Vidéotron founder André Chagnon


UnitedGlobalCom president Mike Fries


Cahners Television Group vice president Bill McGorry


Ground Breaker award recipients, from left, Mike Fries and Iain Osborne for chello broadband, Dheeraj Kapuria of Zee TV, David Haslingden of National Geographic Channels International, André Chagnon of Le Group Vidéotron, John Hendricks of Discovery Communications, British Sky Broadcasting's Leslie Mackenzie and Eddie Ruiz of The Weather Channel Latin America


British Sky Broadcasting director of channels and operations Leslie Mackenzie and *Multichannel News International* editor Janet Stilson

Summit panelists discuss hot topics in Latin America. From left, Jo Dallas of *Multichannel News International*; Ahmad Khamsi of Venezuela's SuperCable; Fox's Mary Ann Halford; Paul Savodelli of Hicks, Muse, Tate and Furst; and Walt Disney's Simon Kenney

Advertising
Hot Spots

Mexico's Advertising Adversaries

BY JO DALLAS

Just a few months ago, everyone appeared happy with Mexico's new pay TV regulations, which included new guidelines for advertising. As it happened, that was only the calm before the storm. A conflict is now raging between programmers and cable operators over how to share an increasingly contested market. Emotions have reached such a fever pitch that local operators are threatening radical retaliation if both sides can't agree.

"If the networks don't sit down with us to discuss this issue, we are going to exercise our rights as licensees ... and block networks' advertisements," warns Ernesto Vargas, president of MVS Televisión S.A., which owns Mexican wireless-cable company MVS Multivisión S.A. Vargas has sent letters threatening as much to all the major panregional programmers working in Mexico. So, too, apparently has Grupo Televisa S.A.'s cable operation, Cablevisión S.A., as well as the programming buying group PCTV. Executives from neither of those organizations returned phone calls.

It is understood that the letters do not contain specific demands, only a request for a dialog. Still, it's clear from interviews — most of which were requested off-the-record — that operators are unhappy that all content can now be beamed directly into Mexico from abroad. Previously, all programming and advertising content originating outside of Mexico could only enter the country via a Mexican satellite.

The problem, say operators, is that the new arrangement doesn't provide a check on content that might violate Mexican laws on obscenity. If unsuitable material is transmitted, operators are liable to prosecution, and can be closed down. Programmers view this as a smokescreen for the real argument: the tug of war over advertising dollars.

Mexican pay TV operators such as MVS Multivisión, pictured here, want more control over advertising.

The new rules, programmers say, go a long way toward dismantling the monopoly once enjoyed by the likes of Multivisión, Cablevisión and PCTV. In the past, many foreign networks chose them as their advertising representatives, because they could also handle the tricky task of domestic uplinking.

"PCTV and Multivisión operated the toll booth that got you onto the highway," says Carlos Díaz, vice president of movie-channel programmer Latin American Pay TV Service. Once upon a time, that made a lot of sense. In the early days of Mexican cable-TV advertising, the market was too small for programmers to justify an ad-sales force devoted exclusively to the country. Better to use the existing, local sales infrastructure, the logic went.

But now that the old toll booth no longer exists, foreign networks have greater freedom to decide how to handle their advertising sales. Many still employ local operators as reps. But operators fear that programmers now have the opportunity to flood the market and undercut their rates.

That's because it is often less expensive for advertisers to go to a panregional network for a one-stop media buy than it is to place spots with a handful of multiple system operators across the region. Of course, the one-ad-fits-all approach doesn't work for many advertisers because they don't have the same brands in all markets. But there are examples of some advertisers buying panregionally, even if they only want to hit one market. Those are some of the reasons why the issue, Díaz quips, is stirring up "a lot of testosterone."

Certainly, a hint of it comes from an angry Vargas. "The networks are selling too cheap and killing the local advertising market here," he says. Vargas accuses the networks of trying to make up in Mexico the revenue they lost in Brazil because of the devaluation of that country's currency last year. It is a controversial point, though programmers admit that they took the full brunt of that particular currency slide. It is also true that with subscriber growth still sluggish in many Latino markets, programmers are focusing

Today Massillon, Tomorrow the World?

BY WILLIAM SPAIN

Last fall, in the northeast Ohio community of Massillon (population 30,000), WorldGate Communications Inc. conducted a test of a new kind interactive television, the results of which could well have implications for advertisers, agencies, cable system operators and subscribers from Santiago to Singapore.

Working with Nielsen Media Research and the local cable company, WorldGate signed up 1,000 subscribers to participate in a study of "channel HyperLinking." This system offers viewers who are already using a high-speed cable Internet provider the opportunity to jump to programmer and/or advertiser Web sites via a direct on-screen link. When the viewer clicks the link, the browser opens on their screen and takes them directly to the Web site.

WorldGate execs describe the system as "the very first opportunity to go interactive with television advertising" and are claiming an impressive response rate from the Massillon experiment, which involved almost 30 advertisers — from behemoth Kraft Foods Inc. to a local car dealership.

WorldGate subscribers can HyperLink to Kraft Foods Web content, above.

WorldGate senior vice president Gerard Kunkel says the "click-through" rate — the percentage of viewers who chose the option of surfing away from a TV spot to a sponsor's Web site — was as high as 2 percent. That is up to five times greater than the same companies' banner ad campaigns and "an astounding response given the infancy of the medium," he says.

Averaged out over the three-month period of the test, every month approximately 79 percent of subscribers used the system to immediately link to Web content related to the programming. While the ads, unsurprisingly, were not as big a hit, Kunkel says that in one particularly busy week, 31 percent used the linking feature during an interactive ad.

Tim Hanlon, director, emerging contacts at media-buying giant

more than ever on extracting revenue from advertising.

Part of the dispute also centers on how the legal limit of six minutes of cable advertising should be divided between programmers and operators. But it has degenerated into a kind of "I said, you said" match of accusations, with both sides disputing definitions.

Operators contest that they effectively control all six minutes. It doesn't mean that have the right to sell all of them, but they have the responsibility to make sure they all adhere to Mexican content laws.

Programmers don't disagree with the last point. But they say underlining all this is a desire by operators to have the final say-so over how the six minutes per hour are divided. Both sides point to Mexico's recent pay TV legislation to justify their arguments. Meanwhile, friction increases.

"Operators are going to advertisers and saying that networks don't control any of the advertising time, which is false," says Michael Fox, vice president, worldwide advertising sales, ESPN International Inc. As a consequence, he adds, some advertisers in Mexico have declined to do business with the networks until the dispute gets resolved.

Meanwhile, both sides continue to argue that in order to grow the advertising pie, operators and programmers must work together. That's all well and good, but right now, there is a lot more testosterone in the air than goodwill. ■

Every Move They Make (Well, Almost)

BY ELENA BOWES

Question: At exactly what hour of what day are European cable subscribers the happiest? The answer to that question is an example of the minutiae that's available in a consumer survey from Universal McCann Worldwide.

Its Media in Mind global survey gives new meaning to the word detail. The $US3.5 million project, Universal's largest research effort to date, examines everything from the products people consume, to the times of day when people are most receptive to advertising, to what media is consumed before a major shopping spree. No question is left unanswered.

The survey spans such far-flung destinations as Malaysia, Israel, Argentina and Turkey. Already available in Europe and the U.S., the massive, three-year old report is being launched in Latin America and Asia this year. That brings the total number of countries covered by Media in Mind to 32, with sample sizes ranging from 4,000 in the United States down to 600 in smaller markets such as Norway.

"We started the survey in Europe because of how fragmented the media and advertising industry are here," explains Jim Kite, senior vice president of international media at Universal. Prior to 1997 when McCann first launched Media in Mind, Europe had very little history of standardized media research across countries. Moreover, the rate of media change varied from country to country. Media in Mind tries to examine how media is actually consumed on a local and global basis by asking those surveyed to fill out a daily-life diary, as well as a detailed questionnaire.

"In terms of media planning, we knew the big picture, but we had no idea when people were reading the newspaper, watching TV, or at what time of the day they listened to the radio," explains Kite.

Germans Under the Microscope

Here's a sampling of the kind of information in the Media Mind survey about viewer habits in Germany

		Total	Satellite/cable used last week	Never used satellite/cable
Often notice if a TV program is sponsored/who sponsored it	Vert%	47.92	48.95	48.55
	Index	100	102	101
When watching video of TV, usually fast-forward through ads	Vert%	77.5	79.27	77.93
	Index	100	102	101
When I go on holiday, I usually go abroad	Vert%	39.7	40.83	38.56
	Index	100	103	97
I would like to live in harmony with nature	Vert%	61.93	60.73	63.03
	Index	100	98	102
Quite often I find TV advertising more interesting than the programming	Vert%	6.99	7.44	5.81
	Index	100	106	83

NOTE: Vertical percentage is the percentage of the target group that agrees to the statement. Index compares the propensity of the target audience to do a certain activity (noted in the question) in comparison with the entire German population.

The information-consumption analysis is important because Universal, which generated global billings of $US13 billion last year, is one of the world's largest media buyers. "Now we can be more tactical, smarter. We can look at when we should put copy out, align copy with peoples' moods. We can look at how people watch TV. If they are light TV viewers, maybe we should be doing alternative forms of marketing, like outdoor events," Kite adds.

To exemplify the kinds of information the survey is reaping, Kite ran a survey for *Multichannel News International* comparing behavior patterns across 18 European markets, comparing those with cable and satellite TV to those without it.

It should be noted that European cable and satellite penetration averages 41 percent across the continent, from a high of 90 percent in the Netherlands to a low of 5 percent in Greece. Besides spending more time washing and less time eating and sleeping, European cable and satellite viewers tend to be younger and more active people with higher salaries. They have a strong interest in their health and appearance and are far more computer savvy than those without cable and satellite. While that certainly suggests strong reasons to buy avails on multichannel TV, there is a downside. Cable and satellite viewers have less brand loyalty. They also happen to be better savers than those without cable and satellite TV.

Pay TV viewers are about 20 percent more interested in the Internet and personal computers and 37 percent more interested in digital TV than those without it. They watch less television, probably because the home PC provides serious competition to the TV. Cable and satellite viewers are much more interested in shopping via the Internet and receiving e-mail.

Finally, advertisers beware: Cable and satellite homes tend to be most stressed around 11:00 a.m. on Mondays and Wednesdays. This group is loneliest Monday evening around 6:00 p.m. and Tuesday morning around 10:30 a.m. And as for the answer to our question? Well, their happiest times are Saturday night between 7:00-8:00 p.m. and Sunday mornings at noon. ■

Starcom Worldwide, sounds a cautionary note: "WorldGate and its channel HyperLinking approach is probably in theory the most direct way to follow through on a viewer impulse," he says. "But I am not personally convinced that it is the most effective or robust way to do direct marketing."

One problem, Hanlon says, is that "there is an extraction. It pulls you away and diverts your attention. As an enhancement to a 30-second spot, it may be asking a bit much of a consumer ... They may be interested in the car, but they may not want to miss the fourth quarter of the basketball game" to pursue it.

However, he sees good potential for channel HyperLinking in the programming realm, particularly in the areas of information- intensive offerings like sports, news, weather and, to some extent, documentaries.

The Weather Channel, one programmer that falls into one of those categories and participated in the test is enthusiastic about the results. Mark Gathen, senior manager of business development for interactive television at the network, describes the WorldGate approach as a three-way "marriage of cable television, the Internet and direct marketing."

The Weather Channel has been working on integrating WorldGate's technology for several years, Gathen says, and recently worked the bugs out of a method to "imbed interactivity in our advertisements."

The channel has extensive operations in Latin America, and Gathen is "excited about doing business with WorldGate down there ... As soon as our advertisers are ready, we are ready."

WorldGate also has designs on expanding the approach internationally. It already offers Internet via cable service in 13 countries worldwide, including Mexico, Peru, Spain, Poland, Singapore and South Korea. Among WorldGate's system partners internationally are Cable Bahamas, Brazil's Image TV and Hunan Multimedia Communications in China.

In the more immediate future, WorldGate is expanding the study this summer in the U.S., where it will launch to 20,000 subscribers in systems scattered across the country, including Takoma, Wash.; St. Louis, Mo., and Philadelphia.

Clearly, there are new enhancements to explore. Starcom's Hanlon, for example, believes that offering picture-in-picture technology would be a "tad more alluring ... The simpler you can make the response and the closer you can make it to the TV experience, the better."

WorldGate is working on picture-in-picture, along with various other refinements, Kunkel says, and the system will only get better. In the meantime, the good folks of Massillon have answered one of WorldGate's most burning questions: When you give the consumer the ability to interact with a television, they will do it.

Latin America's FEE FLARE-UPS

Network fees are fought more fiercely than ever in Latin America's top pay TV markets.

BY JO DALLAS, JOSHUA GOODMAN AND MARCELO CAJUEIRO

Weariness is writ large on the face of one top programming executive as she takes a minute away from the hubbub of the United States' National Cable Show. Executive vice president of Fox International Entertainment Channels and Channel Ventures, Mary Ann Halford has just flown back to the States from Argentina. But it isn't jet lag that's affecting her, nor is it or all the parties going on in New Orleans. "I had a meeting with my friends at Multicanal this week, where I had to deal with yet again another conversation about reducing prices," she explains in exasperated tones.

That's become a familiar situation for a whole slew of panregional program networks as they talk with both Multicanal and its crosstown rival, CableVisión. The beef from programmers is that these two multiple system operators (MSOs) have been able to drive network-license fees downward, largely due to their two-thirds share of Argentina's cable market. The programmers tell tales of the ink hardly drying on their contracts before the Big Two request yet another round of price negotiations.

In many ways, it's still the same old story, the fight for love and glory between systems operators and programmers. Since the dawn of pay television, the two sides have been bickering about pricing the world over. But the downward spiral of relations that's emerged in Argentina is but one indication that the little flare ups that have always been present in Latin America are becoming much bigger in some of the top markets.

Certainly, pricing pressure has increased in Brazil. License fees there and in Argentina have fallen anywhere from 10 percent to 40 percent over the last two to three years, according to programming sources. Sure, subscriber numbers are growing region-wide, but programmers complain that is not enough to compensate them for the decline in fees.

And tensions may soon mount in Mexico, as well. In the past, that market has been relatively calm, because network fees have more or less kept pace with inflation. However, the specter of falling fees in that market looms larger now that consolidation on the systems side of the business is underway. "Mexico will go the same way as Argentina," predicts Ernesto Vargas, president of MVS Televisión S.A., owner of Mexican wireless-cable giant MVS Multivisión.

That kind of comment is guaranteed to send shivers down the spines of every programmer in the region, calling up memories of the market's most explosive fee-related fight to date. Back in early 1999, HBO Latin America Group dropped its movie channels from the metropolitan area of Buenos Aires, following a protracted negotiation in which the operators reportedly demanded a 30 percent rate cut. In some ways, that was Latin America's version of the recent carriage war in the United States between the MSO Time Warner Cable and Walt Disney Co.'s slew of broadcast and satellite-delivered channels.

But the HBO battle may soon be eclipsed in the annals of subscriber-conflict history. Rumblings of what could produce another five-alarm fire are emerging over a new idea floated by some of the large panregional MSO groups: a uniform rate card across the entire region. Among those reportedly supporting such an idea are Denver-based UnitedGlobalCom Inc. and Spain's Telefónica Media S.A. There is also the Dallas-based private-investment firm Hicks, Muse, Tate & Furst Inc. (HMT&F), which owns various assets in the region with Denver-based Liberty Media International Inc., among them, CableVisión of Argentina.

The argument is that it's easier to negotiate a single pro-

Unlike Antonio Banderas and Selma Hayek in the film *Desperado*, Latin America's pay TV executives haven't been able to walk away from their own pricing-related fires.

gramming fee for all distribution systems, wherever they are, rather than negotiate them on a system-by-system basis. Programmers couldn't agree less, perceiving the concept as yet another attempt to tighten the screws on their largest source of revenue.

They also holler that it just isn't practical with such a different mix of economics. Depending on the country, subscribers pay anywhere from $US10 to $US60 a month for basic programming. That makes a mockery of a homogenized rate card, programmers argue. Halford says, "We are not really willing to look at a uniform rate card until operators offer uniform services across the region."

Even when retail-pricing issue is set aside, it's clear that both programmers and operators face different financial circumstances in each market. Traditionally, Brazil has been a more expensive market for panregional programmers because it requires a separate Portuguese-language feed, in a region where Spanish covers a multitude of markets.

Programming costs typically represent 20 percent to 30 percent of a Brazilian system's budget, according to one operator there who requested anonymity. That proportion is lower than it is the United States. Programming costs are about 45 percent to 48 percent of total expenses at Philadelphia-based MSO Comcast Corp, according to its executive vice president and treasurer John Alchin. That's pretty much standard for the U.S. industry, he says, which is adding many more networks because of the digital rollout there.

That's a figure not far removed from that of Argentina's CableVisión, where programming costs are 41 percent of the total budget, according to company officials. They add programming costs are equal to 28 percent to 32 percent of gross revenue.

That figure is slightly lower in Mexico, where programming costs are equal to between 17 percent and 25 percent of total revenue, according to one operator there. Programming costs as a percent of the budget weren't available.

Mexican cable economics were severely affected by the currency devaluation that hit in late 1994. It was a shock from which many are only just recovering. Operators in Mexico are just now getting round to levying the $US18 monthly subscriber fee they charged for a basic package before the peso nosedive, though some such packages are still offered for as low as $US14, and in some cases $US10.

That's welcome relief. But for the programmers, Mexico's economic model does not make it as high a revenue earner as Argentina and Brazil.

Ernesto Tinajero, operations director at the 100,000-subscriber-strong Mexican MSO Grupo Cable S.A, explains, "Mexico has the lowest subscriber fees of any Latin American country, because the per capita income is one of the lowest." Nevertheless, Tinajeiro reports that network fees have not fallen as they have in Argentina and Brazil. "Programming rates have kept more or less kept pace with inflation," he says.

That statement is confirmed by programmers working in that market. But according to one programmer who asked not to be named, operators are constantly trying to hammer them down.

One top programmer even managed to negotiate a slight raise with one of the operators there. But that came only after intense, month-long negotiations, which left him wondering whether extracting the extra juice was worth the toll on the client relationship. "At the end of the day, it was a fragile deal that might not stand the test of time," the executive says.

The tight lid kept on Mexican programming rates is frus-

trating in other ways, too, notes Mario Dubovoy, director of regional sales and affiliate relations for all three Fox-branded Latino channels in the sports, kids and general entertainment areas. "If we are able to raise our prices, we can improve content, have a shorter window [for movies and series] and generally offer a better channel," he says. "Without those funds, we can't deliver on cable what should be a higher-quality product than broadcast."

There is a brighter aspect in Mexico for programmers. The healthy clip at which cable-subscriber levels have been climbing there gives networks increased market share. But that situation could soon be undercut by consolidation on the cable-systems side of the business. The fear is that the emergence of fewer, more powerful systems will only deliver them the kind of leverage that has driven down rates so dramatically in Argentina.

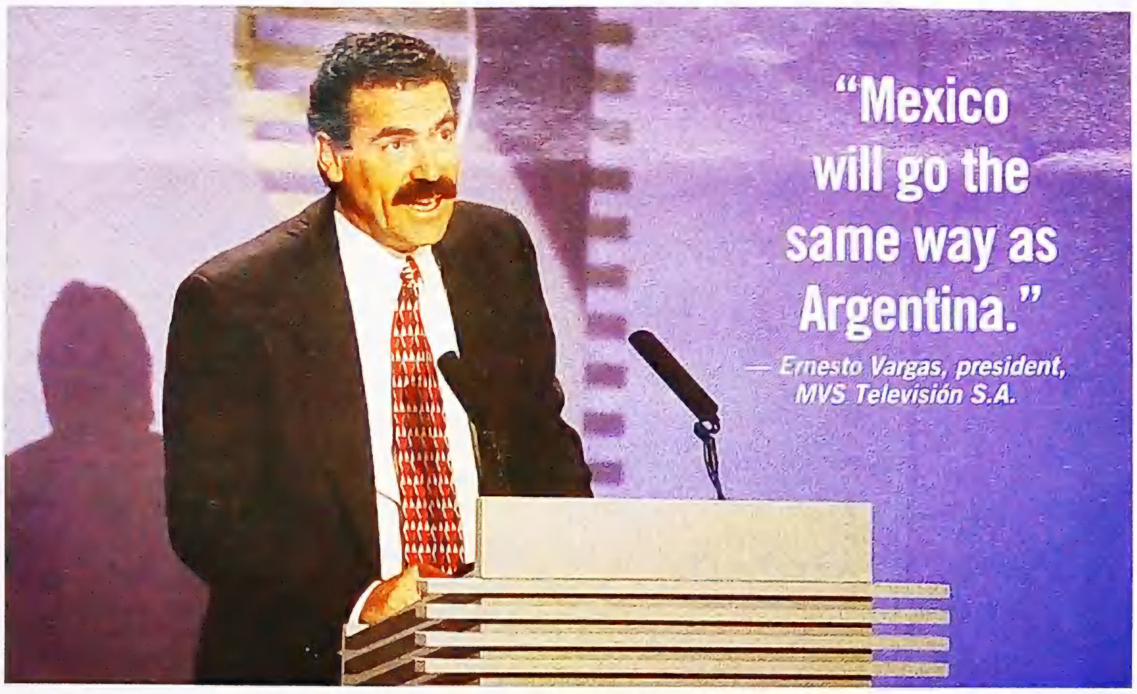
The relationship between operators and programmers has already been badly frayed over the advertising issue. (See related "Hot Spot" story, page 10.) And that does little to prepare the ground for compromise over any future discussions on network-license fees.

While Mexico may rank as a less financially rewarding market for programmers, Brazil is certainly no cakewalk. Like Mexico, the country has faced economic disaster. The devaluation of Brazil's currency, the real, in early 1999 threw a spanner in everyone's business plan as local coin lost half its value against the dollar in a matter of weeks. Despite some subscription-price increases by the MSOs, programmers say that they bore the brunt of the currency collapse, and largely adopted the new exchange rate of 1.8 reals to the dollar. Before the devaluation, it stood at 1.2 to the greenback.

Per-subscriber rates have fallen, as the country's pay TV customer base increased from 2 million subscribers to some 2.9 million in the last three and a half years. For example, one anonymous operator there says that panregional news channels, such as Turner Broadcasting System Latin America Inc.'s CNN International, today cost between 25 cents and 30 cents per sub.

That is significantly lower than the 30 cents to 35 cents that Brazil's leading MSO, Globo Cabo S.A., reported paying for basic-tier panregional channels back in early 1997.

It's a fairly safe bet that Globo Cabo was getting some of the best



rates in Brazil at that time. As is the case everywhere, the bigger the systems company, the better the program rates. And Globo has always been one of the market's largest MSOs. According to well-placed industry sources, operators must serve at least 50,000 subscribers to qualify for programming discounts. Globo Cabo's current base of 1 million subscribers earns it discounts of up to 50 percent off standard rate-card prices.

There is one aspect to the friction between programmers and operators in Brazil that's entirely unique to the market. Globosat, the pay TV program-network group that's a corporate sister to Globo Cabo, has a policy of exclusivity. It refuses to sell its proprietary channels to non-Globo Cabo affiliates. Some say that means Globosat limits its revenue potential — and it creates friction within the industry.

Among those who object to Globosat's policy is the program-buying cooperative Neo TV, which boasts a membership that serves some 660,000 subscribers. "We are considering measures against Globosat's strategy of generating programming exclusivity," says Neo general director Antonio Boaventura. Those measures include filing complaints about Globosat parent Organizações Globo's alleged monopolistic practices to Brazilian's antitrust watchdog, the Economic Defense Administrative Body, as well as the National Telecommunications Agency, Anatel.

While Globo gained competitive clout with exclusivity in its market, Argentine operators have enjoyed far greater program rate cuts than their counterparts in Brazil. To get a flavor of what network license-fee reductions have been like there, you only need talk with Ernesto Sandler, president of Utilisima Satelital. It may be the country's top-rated women's channel — even scoring high ratings against other genres — but Utilisima is not able to command the kind of fees it enjoyed just a few years ago.

"In 1996, when we first entered the market, our business plan projected a minimum of 20 cents per subscriber. Today, a

"We are not really willing to look at a uniform rate card until operators offer uniform services across the region."

— *Mary Ann Halford, executive vice president, Fox International Entertainment Channels and Channel Ventures*

new entrant can count on little more than 2 cents per sub," Sandler says. "We haven't run into too many difficulties, because we're one of the top eight channels. But I would be surprised if the bottom 25 channels are being paid at all. If you have market share, you are protected. If not, the future looks grim."

Sandler tips his hand on what his channel currently earns from some companies. Utilisima gets a monthly per-sub fee of 8 cents for panregional distribution on direct-to-home platform DirecTV and 10 cents on the region's other panregional DTH platform, Sky Latin America.

On cable, Multicanal pays 7 cents per home; CableVisión pays 4 cents. Negotiating for these rate levels were arduous, as each side disputed the exact number of subscribers the MSO had. No wonder, then, that the talking lasted the better part of six months. Consolidation has clearly precipitated Argentina's fee fall, as the Big Two MSOs continue their cost-cutting crusade on the grounds that it is the only way to free up funds to finance continued expansion.

Certainly, where there is less consolidation, namely in the interior of the country, rates are higher. In those areas, Utilisima commands as much as 20 cents per subscribers. And it garners as much as 50 percent of its revenue from that area, says Sandler. One of the worst recessions in a decade has also kept both programming rates and subscriber fees low. An increase in personal income tax in April hasn't helped matters either.

Payment delays are another bugbear for programmers in Argentina. CableVisión vice president Greg Armstrong does not deny there have been delays of this kind, but attributes this to recession-hit subscribers paying later than usual.

That's backed up by Sandler, who says he hears from Argentine MSOs that as many as 15 percent to 20 percent of their client base is in arears at any one time.

Some might argue better late than never. When Argentina's third largest MSO, Supercable Holding S.A., filed for bankruptcy a few months ago, there was no money in the kitty to pay programming bills.

Rumors have circulated for years in Argentina that the big MSOs are looking to implement some sort of tiered-payment scheme. Under this system, the 20 top-rated networks would get paid a greater fee than the middle 20, while the bottom 20 would get paid nothing at all.

Programmers are fiercely resisting this model, which still appears some way off from becoming reality. However, a continuing surplus of channels and limited carriage capacity should eventually result in a Darwinian process of natural selection. But so far, the widely anticipated programming shakeout that would see weaker channels die out has yet to begin in Argentinas or elsewhere in the region.

Another factor at play in Argentina is the introduction of tiered-programming packages. For years, Argentine consumers have enjoyed an inexpensive 60-plus-channel basic lineup. And changing that situation at CableVisión is one of Armstrong's top priorities. Right now, only 13 percent to 14 percent of CableVisión subscribers have addressable set-top boxes, for which they pay $US3 to $US4 per month on top of their subscription fee.

To break that mold, Armstrong says, "MSOs need programmers' help for a premium service to take off." One example of this, he says, would be if a sports programmer secured certain event rights and then split revenue with the MSO for its distribution on pay-per-view. Armstrong is emphatic that "the whole industry needs to work together" on the tiering issue.

Those are honorable sentiments, but the criticism voiced by many programmers across the region is that they have not benefited, but rather suffered, from the consolidation process engulfing many the region's top markets.

As one programmer puts it, "Operators have got to develop more robust revenue streams, otherwise the economics for us won't work."

Whether programmers and operators can find better ways of working together will surely depend on the general health of the industry. Crisis tends to increase tensions, not lessen them. Right now, the moods are often simmering. ■

The Changing Face of Korean

Long dormant, South Korea has emerged as one of Asia's hottest markets.

By Michael Baker

THE FUTURE COULDN'T SEEM SWEETER FOR THE TONGYANG Confectionary Corp. With a new studio complex for 10 channels, deals with Home Box Office Inc. and its parent company Time Warner Inc., and a $US50 million investment from Capital International, Tongyang is poised to be a major player in South Korea's new TV environment.

The so-called Comprehensive Broadcasting Law implemented in March is transforming the industry, giving the maker of Choco Pies — and a host of other companies — a big appetite for multichannel-TV ventures.

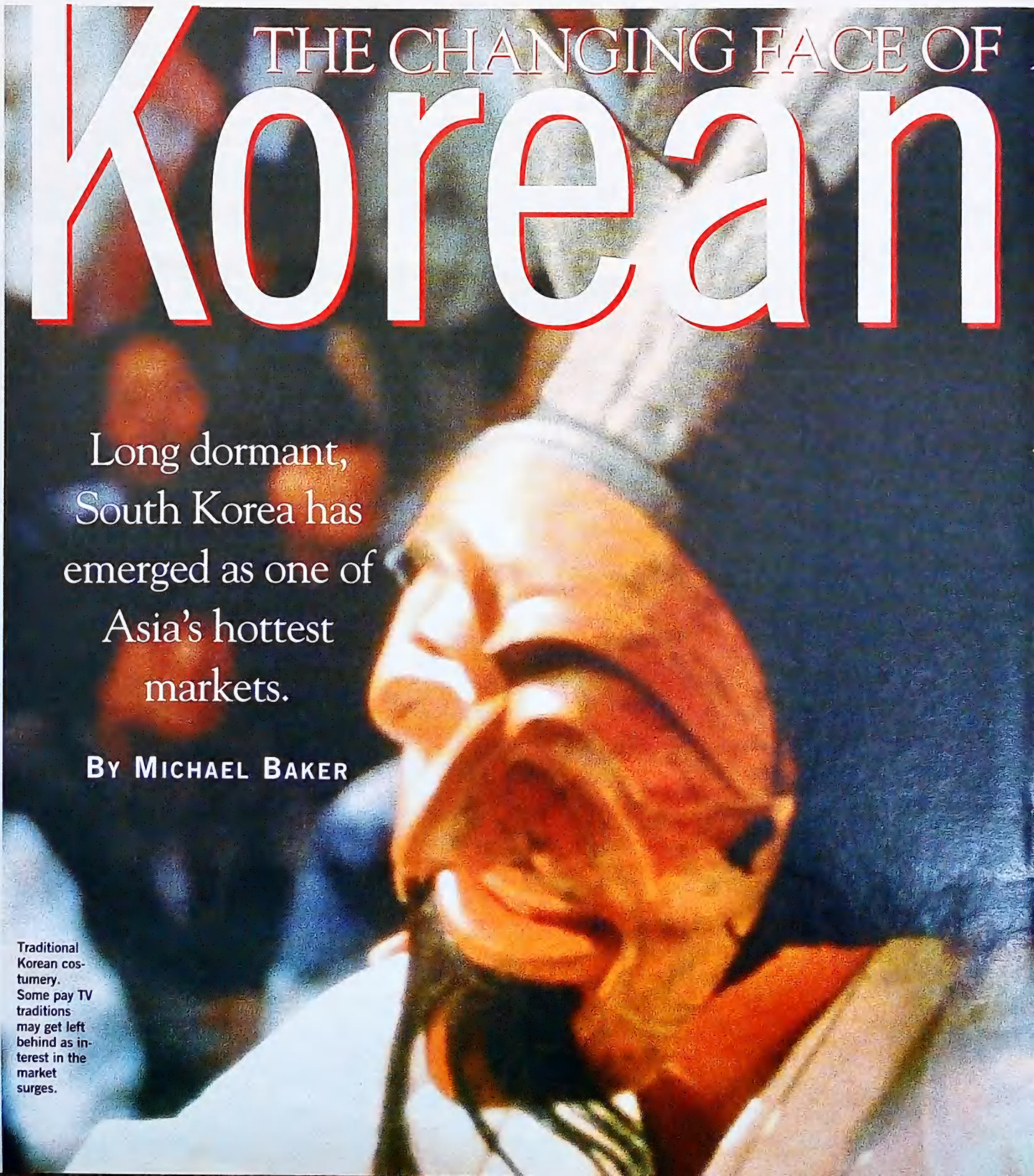
The sweeping legislation may bring tremendous opportunities to one of Asia's most promising but untapped pay TV markets. South Korea remains one of the few countries with a wealthy consumer base but an underdeveloped multichannel industry.

Korea ranks as the 10th largest advertising market in the world. And under the new law, viewership and the number of pay TV channels are expected to explode, allowing the industry to become a more viable alternative for advertisers. Interactivity is also key; the number of high-speed cable-modem users has jumped from 380,000 in December to 610,000 in February. By the end of 2005, it could reach 12 million, the Ministry of Information and Communication predicts.

"The Internet is going to be essential to both cable and satellite," says Kim Moon Won, a sales manager at the panregional program group Star TV.

That may be what sets Korea apart. Bill Katherman, vice president and managing director of the Asia-Pacific region for equipment supplier Scientific Atlanta Inc., notes that operators in the country are coming out of the catastrophe wrought by the Asian economic crisis. "The Korean market is the most explosive in the region, and that's fueling [a drive to build] two-way plant. The system operators never made money in the past, and they're looking at the Internet as their salvation," he says.

The new law certainly provides salvation. It drastically deregulates the industry. Previously there were strict rules that forbade cross ownership of cable systems, the cable infrastructure and program channels. If a given company entered one of those three businesses, it couldn't invest in the others. What's more, if a firm owned one



Traditional Korean costumery. Some pay TV traditions may get left behind as interest in the market surges.

program network, it couldn't own any others. As if that weren't onerous enough, foreign investment was capped at 15 percent. Now, most of those restrictions have been eased greatly, setting the stage for consolidation and new investment opportunities, say analysts.

At the same time, it hands the reins to a newly formed Korea Broadcasting Commission (KBC), an independent regulatory group. No more inter-ministerial disputes or government meddling, promise its advocates.

The result may be the emergence of several heavyweights. Vertically and horizontally integrated "companies with a solid portfolio of well-branded channels, economies of scale and impact in the market [to negotiate deals]" is how the manager of MTV's Seoul office Kim Soon Chul envisions the future.

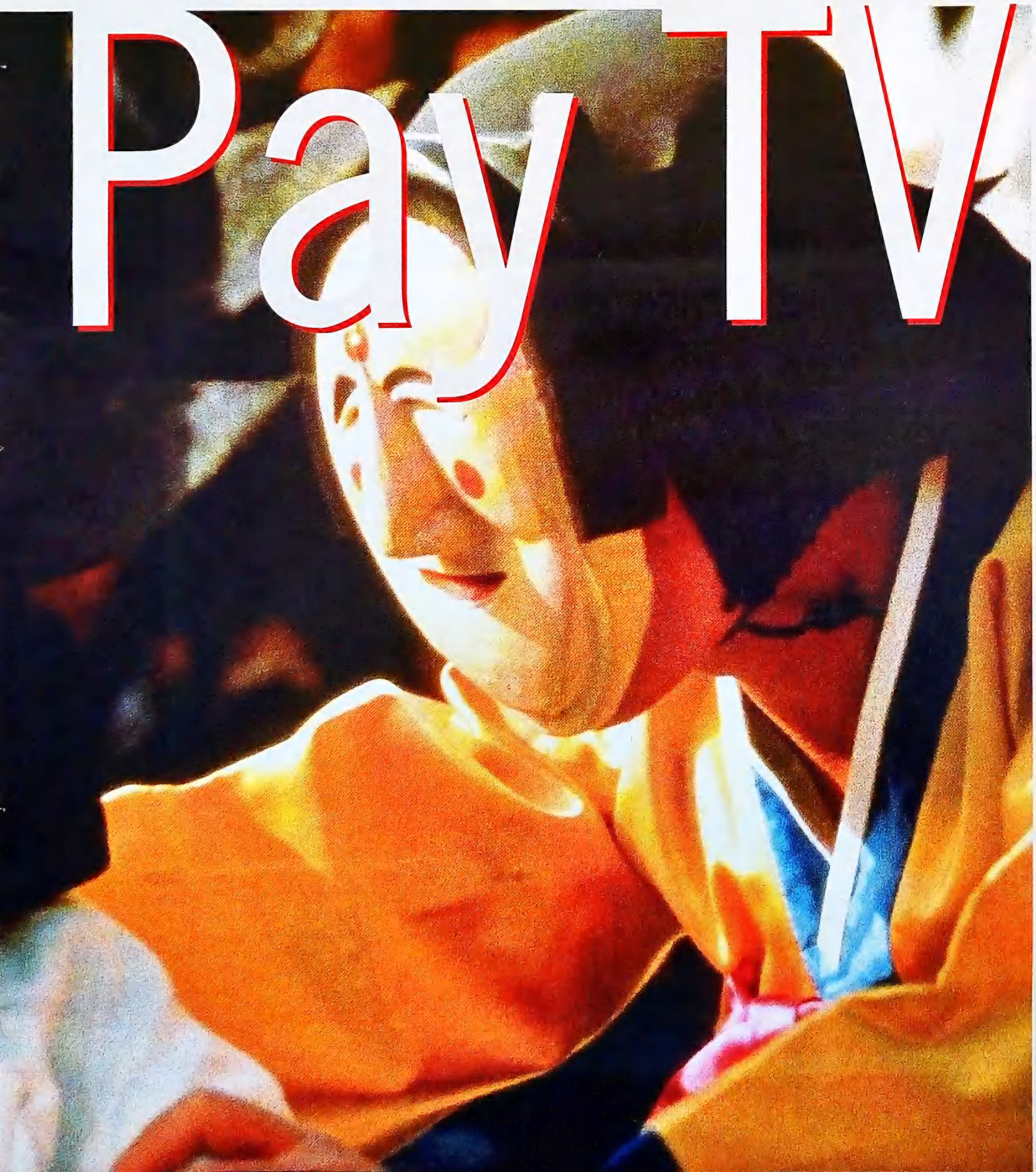
Determined businesses will control everything from "program providers, systems operators, network operators, the Internet, to satellite broadcasting. To do this, a massive capital power will be needed," says Kim Sang Wook, an official at the Korean Cable Television Association (KCTA).

However, it's not a complete free-for-all. The law restricts one company from owning more than a third of the total program channels and one-fifth of the total systems operators in the country. Foreign companies can invest up to 33 percent in a joint venture, and many foreign program providers and channels are discussing deals.

The mergers, acquisitions and strategic alliances that began taking off with the January 1999 passage of a hardwire-specific cable-TV law are shifting into high gear, with direct-to-home TV and interactive services that are included in the new comprehensive law.

In addition to Tongyang, companies with the will and the pocketbook to become big players include Cheil Jedang, a food and entertainment company, and Seoul Broadcasting System (SBS), a major terrestrial station that also owns golf-, sports- and soccer-themed cable channels. Among the overseas investors is News Corp., which is part of a consortium vying for the right to offer a 60- to 80-channel direct-to-home satellite platform. The government plans to dole out one DTH license in December.

One big effect of the new law is the prospect of drastically expanding the cable-TV audience. Because of Korea's steep hills and mountains, some cable systems were set up since the 1970s



to specifically relay terrestrial-TV signals to households in the broadcast shadows.

Several years ago, companies with these restricted licenses began downlinking unencrypted satellite signals and providing a sort of alternative cable to consumers at a quarter the cost. Starting next spring, the government will allow these relay operators to become regular cable-TV companies, but they must cease the illegal transmissions.

This means that the paltry official cable-TV audience that currently stands at 1.7 million households could balloon to between 5 million and 8 million over the next five, according to various estimates.

Salivating at the new opportunities, companies are already battling for dominance in this suddenly promising business. No wonder analysts call it a time of dynamism and chaos. "We don't know what is going to happen next year or next month," said Lee Myung Hoon, executive media director at the ad agency J. Walter Thompson Korea.

Part of that uncertainty is due to a few elements within the new regulations. For example, starting next spring, the government will no longer take applications to start a channel. Any firm that wants a channel simply registers it with the government. However, no new shopping channels will be allowed for the next two years. And overseas investors can't back news channels.

Gradually, the 33 percent cap on foreign investment will rise further, the government says.

Obviously, companies like News Corp. that are eyeing DTH have already lost a "first-comer" advantage in pay TV. With all the new players coming in and the eminent explosion in audience size, it's even more important that DTH get going as soon as possible. "If satellite can launch early enough, there's a good chance we can secure [a significant number of] subscriber homes," says Kim of Star TV, which is controlled by News Corp.

But News Corp. chairman Rupert Murdoch first has to battle his image problem in Korea. Since its consortium, which is led by the telecommunications firm Dacom, announced its plans, everyone from civic groups to unions to cable operators have protested. The most vehement describe Murdoch's programming as sensationalistic and view it as a threat to national morals. They say the News Corp. chairman evades taxes, lays off workers and instigates hostile takeovers. His plans amount to cultural colonialism, some argue.

Another consortium, led by Korea Telecom, is also vying for the license. If the two consortiums

Rupert Murdoch's plans to invest in Korean DTH have irked some, including the cable industry, which paints him in an unflattering manner in its magazine, above.

cannot form a single group by this month, the KBC plans to hold a public forum to debate the merits of each group. "The Korean market is not so large. Our policy is to have one consortium," said KBC chairman Kim Jong Ki. KBC plans to issue the satellite license in September, and the DTH platform could begin transmissions before the end of 2001.

Needless to say, whoever wins the license will pose direct competition to cable TV. With 45 percent of all homes passed at bandwidths ranging from 450 MHz to750MHz, cable offers viewers fewer channels than digital DTH. The Dacom group reckons it can turn a profit in three to five years.

Profitability has been the stuff of dreams for those involved in the multichannel industry to date, given all of the ownership restrictions. With each company limited to owning a single channel, there were no economies of scale, from studios to sales forces. Cable programming was generally considered to be dull. And the two state companies that were dragooned into building networks, Korea Telecom and the Korea Electric Power Corp., stopped work several times because future profitability seemed so elusive.

Two years ago, at the nadir of Korea's economic crisis, indebted conglomerates were selling their cable channels and systems at rock bottom prices. By 1999, the accumulated losses of the cable industry totaled nearly a billion dollars. Blessed are those who remembered to buy cheap, for they shall now sell dear.

Perhaps none of the companies now on a buying binge is quite as aggressive as Tongyang. It invested in three channels this year: OCN, the top-rated movie channel; a premium film service called Catch One; and an interactive game channel that Tongyang that it started from scratch. It already had two other channels, the Tooniverse cartoon network and Bahdook TV which covers the game most Westerners know as "Go." Tongyang plans to double its holdings to 10 program networks in the near future.

ON*MEDIA, the Tongyang subsidiary that operates the channels, just opened a production facility near Seoul with the capacity to run 10 channels. Tongyang says the key to its success will be getting foreign partners. HBO will supply programming to the movie channels. And Tooniverse has benefited from a 17.5 percent equity stake from Time Warner — whose Turner Broadcasting Systems Inc. unit has developed a worldwide Cartoon Network franchise.

The government sanctioned 15 more cable channels in March, adding to the existing 29. And when the licensing process evaporates next year, the total could grow to 50 or 60. "Then it's a battle," says James Rhee, a media analyst at the securities firm Dresdner Kleinwort Benson.

"The competition is going to be fierce," agrees Elliot Chung, an executive with Cheil Jedang, a major food and entertainment company. That company and Tongyang have formed a 50-50 joint venture that will offer their respective networks as a package to the DTH consortium that wins a license.

Cheil Jedang has been busy expanding its holdings. It bought the cash-cow channel Samkoo Shopping in March for about $US310 million, adding to M-Net, a music channel that has a programming alliance with MTV Asia, and Dramanet, a soap-opera channel. Next will come Channel F, a food channel that already can be seen online (www.chf.co.kr) and will be on cable from June.

Tongyang and Cheil Jedang's expansion has also involved systems acquisition, assuring their channels of a base of distribution. Tongyang now has six cable operations, and Cheil Jedang has five. A few years ago nobody wanted cable systems. Now, "the price has skyrocketed," says Rhee.

Internet crossovers are also part of the Korean picture. Cheil Jedang owns Dreamline, a cable Internet service provider. And two other cable ISPs, Thrunet and Hannaro Telecom, are buying their own cable systems.

Home TV Internet Co. launched South Korea's first TV based Internet service in May. For just $US25 a month, subscribers get a set top box with a remote control keyboard that converts their mild-mannered television into a fully interactive experience.

With 30,000 customers so far, Home TV Internet projects 300,000 by year-end.

Government officials feel confident that this time they got it right. "I believe that the consolidation or reorganization will help boost the efficiency of the ailing industry by preventing duplicated investment in personnel and production facilities," says Yoon Sung Chun, an official at the Ministry of Culture and Tourism, who helped draft the new Comprehensive Broadcasting Law.

Not everything is so peachy though. One negative consequence is that when the relay operators — who transmit many satellite-delivered channels from overseas — go legal, many of those channels won't find a place in Korea's cable TV mix.

The new law still restricts foreign channels to no more than 10 percent of an operator's total lineup, so opportunities are slim for channels beamed in from abroad. Because several systems have dropped BBC World Service in favor of CNN International, Britain is lobbying the Korean government to alter the policy. "We feel this is unhelpful for Korea's globalization," says Ros Sparrow, press officer at the British Embassy in Seoul.

"Basically, we have no discrimination," counters the KBC's Kim in speaking of the government's pay TV policies regarding overseas companies. He notes that despite some local protest, the level of overseas investment has increased. "On that basis, even media emperor Murdoch can come into [the] market," he says.

There's another reason to look on the bright side: At least more liberal regulations have finally been activated. The new comprehensive law took a whopping five years to pass the National Assembly.

MTV, which now just has a five-hour block on M-Net, is particularly upbeat about the new law. Korea "is one of the most dynamic and trend-sensitive youth markets in Asia ... For MTV, this is an opportunity to establish a greater presence," Kim says.

Now that the law's a done deal, Kim says that the nine-member KBC can make "hundreds of very specific rules." They range from how much animation should be allowed from a certain foreign country, to which civic groups can receive public-access slots on program networks.

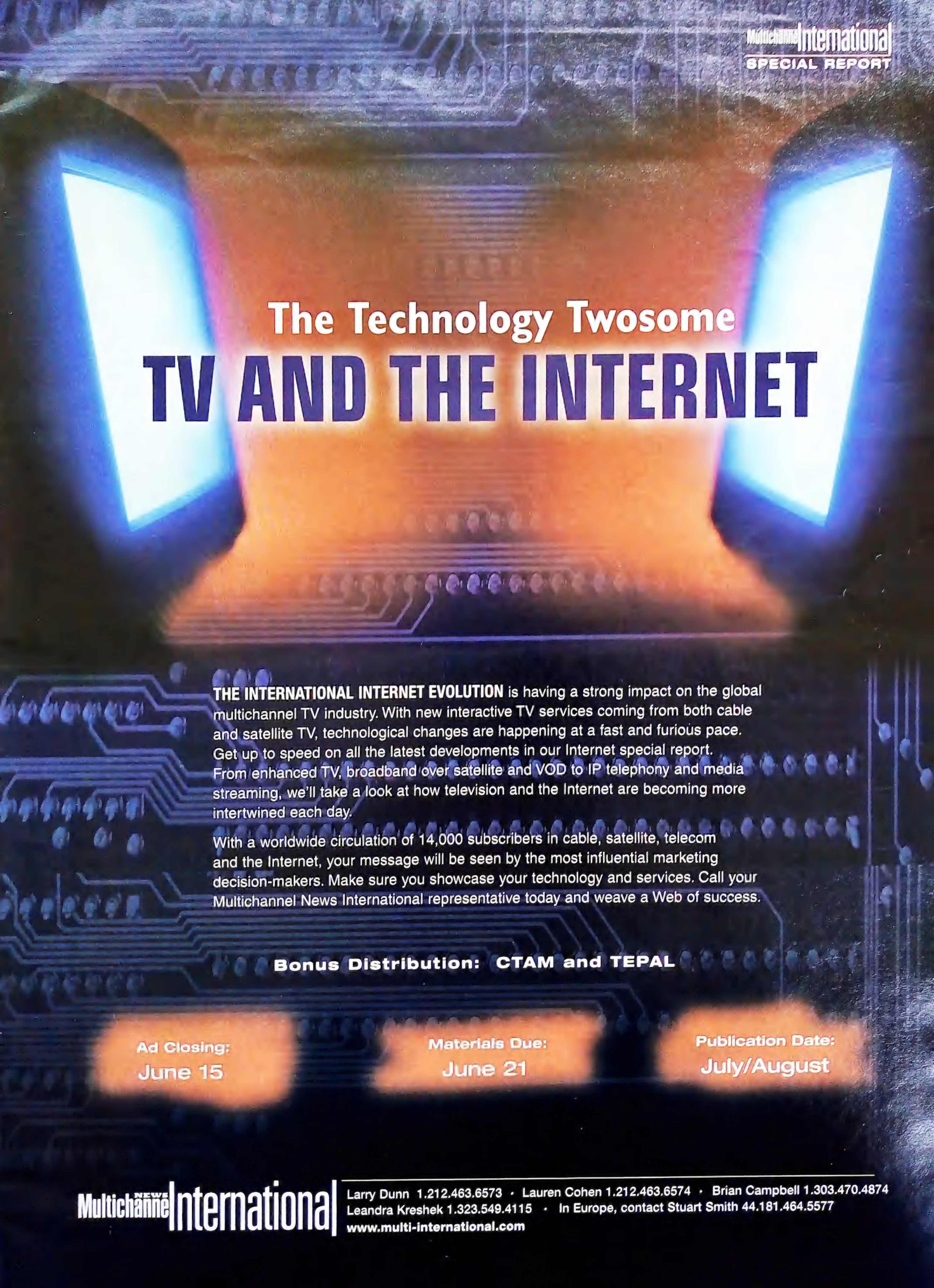
While the KBC's most immediate task is to issue the license for DTH, a longer and perhaps more difficult job will be reigning in the illegal relay operators. By next month they must cease their illegal signal transmissions. But the government has a "manpower shortage" to police them, says Kim.

But industry watchers say bigger fish will most likely swallow up the small illegal MSOs. "We think there will be a fairly fast consolidation," Kim says. ■

Korea at a Glance

TV households	12 million
Cable households	1.7 million
Average channel lineup	40 to 70
Average cost to consumer	Illegal 4,000 won, Legal 15,000 to 20,000 won
Bandwidth	450MHz to 750MHz, with planned upgrades

SOURCE: Korean Cable Television Association



Multichannel International
SPECIAL REPORT
The Technology Twosome
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The race to form international high-speed partnerships is underway, though a winner is far from certain.

High Time for High Speed

Broadband-Internet platforms are toting a bag of products and promises as they build an international presence.

BY HANK HOGAN

Like a politician posturing on the campaign trail, high-speed Internet platforms are busy spreading their messages of great promise these days. Only instead of attempting to win the hearts and minds of one nation, many are intent on conquering the world. There's a good reason for their sense of manifest destiny. Take the case of Excite@Home Corp. of Redwood City, Calif., which markets the Excite@Home broadband-Internet platform. The company's footprint already covers two-thirds of the United States, so international markets represent relatively untapped territory.

"In the U. S., frankly, we're at 90 percent penetration or something, in terms of the homes passed that we can reach," says Christian Dahlen, director of international business development for Excite@Home. "So, for the growth of the company, at least if you just look at the subscription business, we will more and more depend upon the international markets."

For broadband-platform companies and the cable operators they're wooing as affiliates, the push into new territories presents a question that involves choices and challenges: Can broadband platforms such as Excite@Home succeed in an international scope, or will the market instead be served by local players? The choices involve who, if anyone, to team up with; how to develop a platform; and what type of distribution pipe to use. The challenge is to accomplish this while winning the competition that really counts: attracting actual subscribers to their high-speed, high-profile services.

It's still too early to declare whether the international or local platforms will win this race, but it promises to be an interesting one.

YANKS ABROAD

Excite@Home already has a substantial international presence. Through agreements with various cable-operator partners, the company has a broadband footprint that passes about 19 million homes in Australia, Canada, Germany, Japan, and the Netherlands. Worldwide, Excite@Home has about 1.5 million broadband subscribers, more than 1 million of them in the U.S. By far the largest number of international subscribers is in Canada, where the network passes 6 million homes, and analysts say it has upward of 400,000 subscribers. The company also has 11 localized versions of the narrowband Excite portal for various countries around the world.

By comparison, Excite@Home's largest Stateside rival, Road Runner of Herndon, Va., has a much smaller international presence. In January of this year, privately held Road Runner, which counts Time Warner Cable as one of its five shareholders, formed Road Runner International for the express purpose of making the platform more of a player outside the U.S.

"We're now moving in about five or six countries across Asia-Pacific and Europe," says Road Runner International president Martin Hannes.

Though he declines to provide details on the expansion, Hannes does say the company plans to form partnerships for distribution, content and technical applications. The game plan has Road Runner providing the expertise needed to get a cable-based platform up and running quickly, thereby speeding the time to market. Road Runner would also offer the know-how needed to run a broadband service, while operators would supply access to subscribers and help with local content. A priority is Europe, with the United Kingdom, Germany, France, and Spain mentioned as possibilities.

So far, however, Road Runner hasn't announced any agreements with operators outside of the U.S. Hannes says he expects a deal to be struck, possibly in Germany, within a year or so.

The smaller U.S.-based broadband platforms are also looking to expand internationally. High Speed Access Corp. (HSA), of Denver, concentrates on markets — such as those outside major urban areas or in smaller cities — that are not served by the larger platforms. However, Richard George, the company's international chief operating officer, knows that such a domestic focus won't work in the long term.

"By 2005 for, example, our data suggests that roughly 50 percent of broadband-service revenue is going to come from outside the US.," he says. Up to half of that will come from Europe, about a third from Asia and the remainder from Latin America, he adds.

According to George, HSA plans to leverage its U.S. operational and marketing experience in the international arena. However, since it's not directly competing against giants like Excite@Home or Road Runner overseas, it will target larger urban areas that generally have better broadband infrastructures than small or rural markets.

George notes that cable operators may need particular help in the areas of broadband content and customer service. By providing these, HSA hopes to partner with MSOs that either don't want to or are unable to create their own broadband service. Like Road Runner, HSA doesn't have any actual agreements with operators in place, though George says developments are on the horizon.

However, at least one smaller platform is establishing overseas business. San Francisco-based SoftNet Systems Inc. offers a broadband service, ISP Channel, to small, independent MSOs in the United States. With only 17,000 subscribers, ISP Channel is tiny compared with the majors, but, its executives say, size doesn't matter.

"The focus is really not to compete with the national portals. We've got a whole platform of local-publishing tools for really driving local content," explains SoftNet president Ian Aaron. The company's expertise has helped it establish partnerships with multiple system operators (MSOs) in Canada and Puerto Rico.

On a much greater note, SoftNet has nailed down a major deal with Hong Kong-based Pacific Century CyberWorks Ltd. (PCCW), the brash Internet investment group headed by Richard Li, the founder of the Asian program provider and direct-to-home platform Star TV.

In March of this year, SoftNet and PCCW formed and launched Pacific Century SoftNet to market broadband services to cable operators in more than 50 Asian countries. The two plan to use SoftNet's ISP Channel as a template to enable Asian operators to tailor their own broadband-Internet platforms without having to develop everything from scratch. SoftNet's network-management expertise will also be part of the mix. As part of the deal, PCCW invested $US129 million in SoftNet, becoming the company's largest shareholder and picking up two seats on its board.

There's a reason for this largely one-way movement of broadband platforms out of the U.S. "The bulk of the activity in any type of broadband connection is between 80 and 85 percent in North America," says Mike Paxton, a senior analyst in converging markets and technologies for research firm Cahners In-Stat Group. That company is a unit of *Multichannel News International* parent Cahners Business Information. "It's going to stay like that probably through about mid-2002 before you really see growth take off in other areas, primarily in Europe, and then shifting to Asia a little bit later."

HOMETOWN HEROES

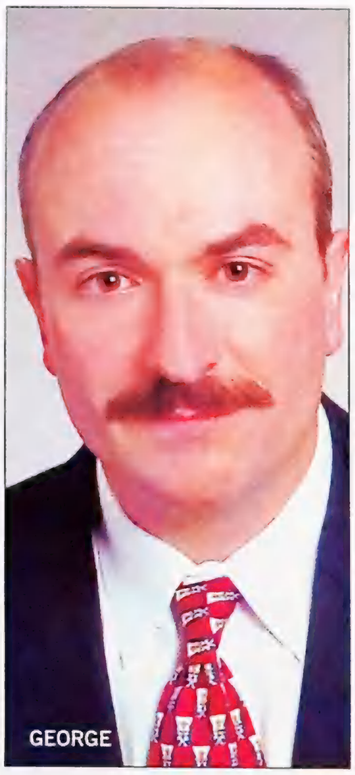
That isn't to say that there aren't any homegrown platforms based outside of the U.S. The best known is probably Amsterdam-based chello broadband N.V. It's a unit of Denver-based UnitedGlobalCom Inc.'s (UGC) United Pan-Europe Communications N.V. (UPC).

Chello's operations extend all the way to Australia and Latin America, thanks to UGC's holdings there. But its primary business is in Europe. UPC's European network passes more than 10 million homes in 16 countries, providing chello with a huge potential market. At the end of the first quarter, the platform had 171,000 subscribers, making it Europe's largest broadband-Internet platform.

Like its U.S.-based counterparts, chello aims to reel in users with a flat rate fee for an always-on, high-speed connection. Also like its Stateside peers, chello wraps a portal and platform around the experience, and seeks to provide content so compelling that customers will pay a premium for the service.

However, all of the multinational broadband-platform operators face competition from a number of homegrown, proprietary systems from local MSOs. In that realm, British MSO Telewest Communications plc this year is rolling out its own service, blueyonder, to its 4.7-million-home network in the United Kingdom.

Since last October, NC Numericable, a French cable operator part owned by Canal Plus S.A., has partnered with AOL France to offer Internet service over the Numericable network in various cities around the country. For a flat fee, customers receive a high-speed Internet connection, an AOL France account, local news and a list of top Web sites accessible at high speed.


GEORGE

Menta, a full-service telecommunications operator in Catalonia, Spain, is another local player with its own service. Through its cable network, Menta provides high-speed access to the Internet under its own branded portal and platform. It's aiming to attract subscribers to its network with a value-added proposition and to squeeze more revenue from its relatively new and up-to-date cable plant.

"Our intention is to fit our [broadband] servers as much as possible with special content that can exploit the last bit of our network," comments Pere Alemany, network operations manager for Menta.

The plan may be working. Menta began offering both television and high-speed Internet access at the end of 1999. By the end of the first quarter this year, the company had more than 10,000 television customers and 6,000 broadband Internet access subscribers, a take-up rate that would leave many platform operators drooling.

France Telecom Cable Interactive is also developing its own platform as an offshoot of its Wanadoo dial-up service. "We know our customers, and we can make our choice and aggregate our content, which gives an advantage to our customers," says Christophe Lasserre, the company's general manager.

CONTENT COUNTS

To be sure, the major multinational players such as Excite@Home, Road Runner and chello have a powerful ally that could help them turn local cable operators into their affiliates. While customers initially sign up solely for the speed of broadband Internet, it's not the only thing they want.

Speed alone will attract "the first 5 or 10 percent of your customers. But then you very rapidly move into a segment where, actually, they want everything," says Excite@Home's Dahlen. "They want the great customer service, and they want a portal that really helps them use the Internet."

One of the must-haves is local content, such as sporting events, concerts and news — programming that the major platforms are better able to produce or acquire. In many ways, this is similar to television. Lasserre of France Telecom Cable Interactive says that's why he thinks television networks may actually be a part of the broadband mix. However, most cable operators aren't familiar with, or necessarily good at, creating content.

The multinational platforms figure their expertise in developing and delivering a compelling broadband experience will prove invaluable to local-network operators.

Chello, for one, increasingly will "be marketing our service on the basis of content," according to its president and CEO Roger Lynch. Already, chello has more than 150 content partners. Much of chello's lure includes rich-media content such as local-language streaming video, live concerts and sporting events, full-screen interactive gaming, and local and regional news services.

On a technical front, consider the problem of how to deliver content. With a broadband-cable connection, the rate at which data is delivered into the home may be measured in megabits per second and have few network delays. Both of these are necessary for streaming in video and audio.

However, the wider Internet isn't as well controlled and managed, and may hinder a broadband-Internet subscriber's ability to receive sophisticated content. As the saying goes, a chain is only as strong as its weakest link. From the subscribers' point of view, it doesn't matter why there's a glitch in the network. They just know the content looks bad. And the messenger — in this case the broadband-Internet service — catches the blame.

Therefore, many platforms are co-locating their own servers and content-storage mechanisms, or caches, at the headend in order to handle subscribers' requests. In this way, problems with Internet are avoided since the connection is over a controlled network that runs, for example, from the subscriber to the headend. This makes the experience more compelling, but it's the type of network know-how that local platforms may lack.

There is, however, one thing the local operators have and will control until — and if — open networks become a reality: access. Obvious partnering is already seen in the large footprint that Road Runner has with Time Warner Cable properties in the U.S., chello with UPC and UnitedGlobalCom holdings, and Excite@Home with AT&T, Cox Communications Inc. and Comcast Corp.'s Stateside systems. As these services expand from their traditional base, however, they'll need to strike other long-term, exclusive deals with systems to which they have no corporate relation.

That could lead to some interesting arrangements. For instance, one potentially large market with some unique regulatory aspects is Brazil. That's not because Brazilian operators don't want to offer broadband access. While cable operators own the infrastructure and may provide television, they cannot directly own a broadband ISP service, though one can be held by a corporate cousin.

"Cable companies cannot themselves provide what the legislation or the regulation calls value-added services," says Moysés Pluciennik, chief executive officer of Globo Cabo S.A., Brazil's biggest cable company which just launched its own high-speed service, Virtua.

The regulatory framework is such that essentially the same terms must be offered to all high-speed players. Cable operators cannot favor any particular platform, not even those to which they are corporately linked. Pluciennik reports there are four services currently competing for subscribers on Virtua.

These and other local conditions elsewhere may make international expansion of the large platforms difficult.

PORTAL PREVIEWS

Besides their immediate access to subscribers, homegrown platforms have other advantages, such as brand recognition among potential customers and a grip on local tastes.

However, the large, panregional broadband platforms are working to erase these advantages. And they're doing this by going in the narrow door.

Although broadband access is not available everywhere, dial-up access to the Internet is widespread, and Excite@Home, for one, is exploiting this. Its Excite portal has more than 50 million registered users, many of whom are outside the U.S. That allows the company to market its broadband services to subscribers who live in areas where it's available, and build brand awareness in uncharted territories. It also provides a means to develop local content expertise prior to the introduction of broadband access.

"Excite@Home may have some advantage in that the Excite portal has been available, in terms of customized additions of it, for other languages and other audiences for awhile," says Joe Laszlo, a senior analyst with New York-based Internet-research firm Jupiter Communications Inc.

Menta, France Telecom and chello are also using Web portals in hopes of whetting the appetites of dial-up subscribers.

It would seem that Road Runner is at a disadvantage. Although it has an informational Web site, it has no portal-like content for the dial-up market, and that could hinder its ability to build awareness, content, or potential subscriber lists prior to broadband deployment in new markets.

However, Road Runner may soon have the 800-pound Internet gorilla in its corner. If the proposed merger of America Online Inc. and Time Warner takes place, it will give Road Runner ties to the largest Internet-service provider in the world. What's more, AOL has a growing worldwide presence and a huge array of proprietary content and content partners.

"The involvement of AOL through that shareholding which Time Warner now holds in Road Runner will obviously provide certain opportunities for us and may have other consequences," says Road Runner International boss Hannes. "But at this point in time, I guess my gut feeling is that there are some positives in terms of possible ability for Road Runner to get initial applications and new content."

There is another way that broadband-Internet services may spread, and while it has nothing to do with cable, it has everything to do with access. Some platforms are choosing digital-subscriber line (DSL), the other widely available broadband technology that uses copper telephone wires to provide high-speed access.

In April, Excite@Home signed an agreement with Rhythms NetConnections Inc., a provider of DSL-based broadband services to

46 markets in North America. As part of the deal, Rhythms invested $US15 million in @Home Solutions, the Excite@Home unit targeting small and medium-sized cable operators. In return, Rhythms became the exclusive provider of Excite@Home in specific markets outside of Excite@Home's current cable footprint. The deal is significant, because it enables Excite@Home to reach an addi-


LASSERRE

tional 15 million homes without relying on cable.

Many of the homes it's adding are in areas served by Time Warner Cable or smaller, independent operators. The deal may signal a trend.

"We have had [cable] access for four years, and we have struck now our first DSL deal. I would expect that we strike our first DSL deal internationally this year," predicts Excite@Home's Dahlen.

Because DSL is available in many areas where cable is not, it's even possible that a broadband-Internet platform such as Excite@Home could break into new markets via phone lines, rather than cable. Dahlen, for instance, cites Italy as a country where low cable penetration almost assures that broadband platforms will deploy over DSL. Others are also exploiting this alternative to cable from the get go. With its Wanadoo product, France Telecom will provide a broadband platform over both cable and DSL. For example, a DSL rollout, will take place in Paris, where the company does not have a cable franchise.

This expansion of broadband reach does entail additional costs, but the benefits can be substantial. With the Rhythms deal, for instance, Excite@Home grew its footprint by 20 percent. That spreads the development costs and some of the delivery expenses over a wider audience, cutting the overall cost per subscriber.

Such indifference to distribution may provide international broadband platforms with a significant advantage over their local competition. These platforms may not be as wedded to the infrastructure as local carriers are, and hence may be able to aggregate subscribers into larger groups. Indeed, these companies are pipeline agnostic.

"Right now the focus has been cable. But once we're done focusing on cable, we'll look to other means to get to the end-user," says SoftNet's Aaron.

Just as importantly, it could help reel in subscribers. Chello's Lynch notes that employing a multi-platform strategy, which will increasingly involve Web-enabled mobile phones, will create an attractive always-within-reach service.

With their mix of sexy products and technical helping hands, multinational broadband-Internet platforms are making themselves attractive partners, even if some operators choose to go it alone. But they'll have to move quickly. Industry executives note that local cablers could continue their own high-speed deployments, sewing up Europe within 18 months and Asia over the next three years.

The consummate politicians, high-speed services promise they'll get the job done. "Is the window short? In some places shorter than others," says George of HSA, echoing the sentiment of his peers and competitors. Whatever the case, "We expect to be a player." ■

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Home Nets: Friend or Foe?

BY ROGER BROWN

IN SYNC

Over the course of its history, the cable-television industry has faced a number of challenges and yet still managed to flourish. Onerous regulations, inaccessibility to affordable capital and unfair behavior by competitors have all been overcome by technological innovation and public demand for the differentiated programming cable offers.

In fact, as cable operators have aggressively embraced fiber-optic technology, made it affordable, and married it to craft-friendly coaxial, cable networks have become the most powerful conduit to every home it reaches. No other medium can carry as much information, to the home and from the home, as quickly.

Despite that rosy picture, a new threat looms: in-home networks.

As the popularity of high-speed data delivery and Internet access has mushroomed throughout the U.S., Europe and Asia, cable modems are becoming almost a necessity. The "always-on" connection to the Internet will allow people to experience the Internet much in the same way they watch television.

The number of multi-PC households is exploding, almost to the point where there are as many PCs in the home as there are TVs.

Problems arise in these multi-PC homes, however, when different users want to share peripheral devices like printers. Rather than buy multiple printers, people are installing mini local-area networks in their homes. Then, they're connecting all their PCs to a high-speed modem to share the fast connection.

But that creates problems of its own. With multiple users, throughput speeds to each PC drop. Depending on the medium used to connect the devices (phone line, power line or coaxial cable), there are trade-offs with speed and convenience. Power-line networks are slow and susceptible to electric noise. Phone lines work pretty well, but not every home has a phone jack near the computer. Coax is great, but most people don't have outlets in every room, either.

Furthermore, consumers who elect to wire their own homes tend to choose the most inexpensive cable they can find — and that's not necessarily a good thing. Bad coax, poor connectors, improper connections and myriad other maladies hinder good signal flow.

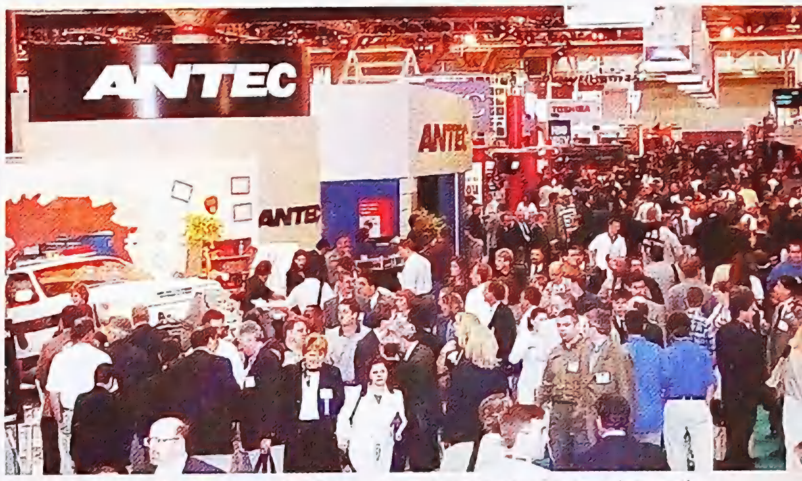
That's why future in-home networks should be based on wireless technology. It's the only option that gives consumers the flexibility they need, and doesn't force cable operators to make expensive house calls to set up these networks.

Wireless networking protocols are currently being developed. Standards like Bluetooth appear to be a promising way to provide consumers with the connectivity they demand without breaking the bank. That's good news for cable operators that see revenue potential in providing and supporting home-based networks. It's also a necessity if these networks are to be friends, not foes.

Cable 2000 Exhibitors Push Tomorrow's Technology Today

Industry Converges on New Orleans for a Taste of New Services

BY CED STAFF



National Show attendees walk the floor, where technologies such as interactive TV and home networking were in the spotlight.

Most of the 30,000-plus attendees of the United States National Cable Show in New Orleans last month surely came away from the confab believing that advanced services such as video-on-demand and interactive TV are just around the corner. Hardware and software vendors demonstrated all this and more in an attempt to show that tomorrow's products are ready for deployment.

A variety of demonstrations at Cable 2000 centered around home-networking devices. Cable Television Laboratories Inc., the U.S. cable industry's research-and-development consortium, also got on the bandwagon, announcing that it is heading an initiative that will pair cable operators with home-networking equipment manufacturers in the next phase of the organization's In-Home Networking project.

Headed by Terry Shaw, CableLabs' senior advisor of network systems, this next phase of the home-networking initiative calls for cable operators to collaborate with product vendors to design the

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Firms Step Up Global Efforts To Recruit Savvy Tech Staff

BY CRAIG KUHL

The worldwide search for employees who possess an assortment of technical and interpersonal skills is prompting global broadband-communications companies to intensify their recruiting and training strategies as they hunt for the elusive multi-skilled employee.

In fact, quality staffers who can install complex telephone, computer and cable equipment seamlessly into homes and businesses, and upsell new services with a smile, seem to be on the endangered-species list.

Add to that the shrinking international labor pool, and it's no wonder global communications companies routinely admit that the lack of quality, skilled recruits is their top worry.

"We need technical people in television, telephony, Internet and data, and the characteristics we require are that they are young, with good academic preparation, but it's not easy to find them in the market with these technical and communications requirements," said José Carlos Serrano, director general of Supercable, a 20,000 subscriber multi-service provider in Sevilla, Spain.

Supercable's ongoing search for skilled employees is forcing the multi-service provider to expand its employment efforts to professional schools, Web pages and to a recruitment firm, which Serrano says has created 70 new sources of recruitment.

Despite the aggressive recruitment tactics, keeping quality employees is just as critical as finding them. "It's not enough to pay

FABRIZIO

them based on responsibility, we also have to foment other enterprise attitudes and give them the opportunity to form their professional skills," Serrano says.

Continued on Page 36

DSL Picks Up Speed Throughout the World

Deregulation and competition have stoked interest in DSL as a broadband delivery method

BY MICHAEL LAFFERTY

The much-touted deregulation of the telecommunications industry in the United States by way of the 1996 Telecommunications Act was just the tip of a global-sized iceberg. Whether occurring independently of the U.S. effort or in response to it, more and more countries are breaking up government and private industry monopolies to introduce competition into their own telecommunications markets.

As a result, digital-subscriber line (DSL) technology is receiving increased attention as a viable (and profitable) way to deliver broadband services to businesses and homes around the world.

"Deregulation is sweeping the globe," says Dave Caputo, vice president of marketing for Pixstream Inc., a digital-video solutions provider. "It's not uncommon in the rest of the world for phone and cable operations to be in the same company. A tenet of deregulation is that no one company can own both pipes into the home. Because of that, phone companies are selling off their cable assets, and then immediately thereafter, they're looking to recover those lost TV revenues. The way they can do that is DSL over their twisted-pair plant.

"The other thing to be aware of is that in the rest of the world, cable penetration is considerably lower than telephone penetration. There are places in the world where you simply can't get cable-TV entertainment. Now, if you're able to offer TV entertainment over twisted pair, the proposition for delivering that to more people is a lot less expensive."

Many countries around the world are looking to upgrade and expand their telecommunications networks. To do that, many, if not most, realize their governments possess neither the physical nor financial resources to do the job. That means they have to enlist the help of private businesses by increasing competition. Some countries have been more successful at it than others.

The homogenous United States model is rarely found in other countries, says Paul Forzisi, senior marketing manager, international for ADC Telecommunications, a broadband-communications equipment manufacturer. In an report he recently wrote for the International Engineering Consortium's Digital Subscriber Line 2000 study, he notes that no two countries are the same when it comes to deregulation. "Some countries have strict regulations that are actively enforced by bodies that regulate competition," he says. "Other countries have simply allowed the players to work it out among themselves. That system inevitably takes longer, because the issues end up in the courts, and there is very little cooperation and little sharing of access rights until the court determines specific responsibilities."

The United Kingdom was one of the first countries in Europe to open the competitive doors. While interconnection at switch sites is allowed, the copper is still not unbundled and the incumbent provider is loathe to give up its copper network.

Germany began to unbundle its local loop last year. Many new entrants are expected in the huge market where high-speed DSL services are already being marketed. Denmark has also unbundled its phone network and is already introducing DSL services. Norway and Holland are expected to do likewise soon.

In Asia, Singapore is leading the pack even though it still has a monopoly carrier. Using DSL as one of the enabling technologies, the incumbent provider is installing a large ubiquitous multiservice access network.

While it's not unusual for competitors to spend a year or more to negotiate access rights with incumbents, some have decided that time to market is more important. So, they've dropped the negotiated approach and are building their own copper networks. That's the approach of several competitors in South Korea and New Zealand. Even though it's expensive up front, these competitors are gaining market share by focusing on specific cities or regions.

The many flavors of DSL that have perplexed even the most rabid telephony groupie have finally been whittled down to a manageable dozen or so. Pick a flavor and it does something different to the copper wiring in the home or office.

Those looking to bring relatively high-speed Internet connectivity to their old voice line will probably use either full rate asymmetrical digital subscriber line (ADSL) or G.Lite ADSL. Telco providers looking to expand the line carrying capabilities of their copper are taking a serious look at voice over DSL, or VoDSL. And those who have the audacity to give their customers regular voice service, high-speed data service as well as digital television over a single pair of twisted copper will have their sights set firmly on very-high-data-rate DSL (VDSL).

While there still may be too many variations of a theme when it comes to DSL, they do have a few things in common. Because DSL signals degrade as they travel over copper, customers living more than 18,000 feet (about. 3.5 miles) from a central office (CO) are likely to see or hear the effects of appreciable signal attenuation. In other words, the greater the distance from the central office, the slower the DSL service.

In addition, some telcos have installed digital-loop carriers (DLCs)

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THE MANY FLAVORS OF DSL

The burgeoning DSL market serves a variety of customers with a number of business models. There's a flavor for every taste. Take your pick in either speed, application, or price point.

Asymmetrical flavors: upstream and downstream speeds differ

DSL (DIGITAL SUBSCRIBER LINE): Exploits unused frequencies on copper telephone lines to transport traffic (voice, video and/or data), usually at multi-megabit speeds.

ADSL (FULL RATE ASYMMETRICAL DSL): Offers different upload and download speeds (up to 7 Mbps). Enables voice and data to be sent simultaneously. Can also be used on ISDN lines. Good for general Internet access and for applications where downstream is more important. Standard specs: ITU REC. G.992.1 and ANSI Standard T1.413-1998.

G.LITE ADSL (SIMPLY G.LITE): A medium bandwidth version of ADSL developed for the consumer market that allows Internet access at up to 1.5 Mbps downstream and up to 500 Kbps upstream. In most cases, will operate over existing home telephone wiring, which means simpler installation process. Standard spec: ITU Rec. G.992.2.

RADSL (RATE ADAPTIVE DSL): A non-standard version of ADSL.

VDSL (VERY HIGH BIT RATE DSL): Up to 26 Mbps on relatively short lines that usually run from neighborhood cabinets that link to a central office via optical fiber. Currently being introduced in a number of trials and limited deployments to deliver video services.

Symmetric flavors: upstream and downstream speeds are equal

SDSL (SYMMETRIC DSL): Equal speeds make this DSL version especially good for business applications (e.g., LAN access, distributed applications, video-conferencing, etc.) where more robust upstream speeds are needed. Business services can be supplied with or without ordinary telephone service. While popular in Europe, it's also being widely deployed in the United States by competitive or alternate carriers. Moving towards standardization within European Telecommunications Standards Institute (ETSI).

HDSL (HIGH DATA RATE ODSL): Using two or three twisted pairs, this DSL variety is generally available at either 1.5 or 2.3 Mbps in both directions. Does not provide standard telephone service over the same line. Considered an economical replacement for T1. Standardized through ETSI and ITU (International Telecommunications Union).

HDSL-2 (SECOND-GENERATION HDSL): Delivers 1.5 Mbps each way on one pair of wires. Supports voice, video and data (individually) using either ATM (asynchronous transfer mode), private-line service or frame relay. Does not support simultaneous voice service on the same wire pair. Standardized through ANSI.

IDSL (INTEGRATED SERVICES DIGITAL NETWORK DSL): Supports symmetric data rates up to 144 Kbps on existing phone lines. Unlike other DSL flavors, this version (and G.Lite in the future) can be delivered through DLCs (digital loop carriers — a remote device placed in newer or rebuilt neighborhoods to simplify the distribution of phone company wiring and cable). Differs from its cousin ISDN in that it provides "always-on" service, and can utilize ISDN modems and/or terminal adapters.

Source: DSL Forum

DSL,
Continued from Page 26
in their networks. At this time, most DSL flavors don't work on networks that have DLCs. This means it's often a crap shoot whether potential subscribers can actually sign up for a DSL service. The telco usually has to check the potential subscriber's location to see how close it is to the central office. Unfortunately for potential subs, and even more so for the telcos trying to battle competitors in and out of their space, the answer is far too often "no can do."

In this regard, says Steve Klein, vice president of contract management for NextLevel Communications, telcos can't help but shoot themselves in the foot to a certain degree. "If you back up a little bit, for the past five years there's been a huge growth in the Internet," says Klein. "And up until recently most of the Internet access has been using a 28.8 or 56 kbps modem in the PC. The phone companies have had a huge demand for second and third lines going into homes for faxes and computer use primarily. That's forced them to have to put in digital loop carrier to get more copper pairs to those customers. That very fact alone has worked against ADSL being mass deployed into residential markets."

One of the most ambitious and most-watched DSL service rollouts in the United States is taking place in Phoenix, Ariz. That's where telco US West Inc. has gone all out to deploy VDSL service, an effort that began in June 1999. Its "fiber-to-the-neighborhood" technologies offers fully integrated digital video and high-speed data services to residential and business customers alike.

By putting fiber deeper into neighborhoods, the company reaches to within 4,000 feet of a customer's location. As a result, US West's VDSL technology delivers speeds up to 26 Mbps downstream and 3 Mbps upstream.

In the neighborhood, signals are converted and transported via ATM and MPEG 2 technologies through the existing telephone wires in each home to inter-connect individual TV sets, personal computers, telephones and audio equipment.

Klein says the economics for deploying a VDSL system are quickly becoming more compelling, as well. "You can put in our system, which resembles a digital loop carrier system, for the same cost you would you pay to put in a [telephony]-only system. And then you can provision it as you add the new services, and all you have is the incremental cost of the new services. VDSL is no more expensive than ADSL to put in, because you're sharing the same infrastructure across the board."

One of the most frequent criticisms of DSL is its relatively short range and its (relatively speaking) modest upstream/downstream speeds. The culprit in many instances, says Peter Santos, vice president of marketing at telecom software company Voyan Technology, is DSL crosstalk. Similar to co-channel interference in wireless applications and ingress noise in the cable plant, crosstalk forces DSL providers to limit their service offerings.

Because crosstalk is so unpredictable, says Santos, providers scale back the service to try and minimize the problem. "What happens," says Santos, "is that carriers make very conservative assumptions about how far from the central office you can get service and the data rates you can get. And this is a major strategic issue for the carriers because they're competing against a very aggressive digital-cable rollout that's occurring now."

As more countries deregulate their telecommunications industries, technologies like xDSL will get more and more attention. The ability of such DSL flavors as ADSL and VDSL to deliver high-speed access, as well as voice and video enable countries to upgrade their networks. And maybe even more importantly, it helps keep them in step with the telecommunications revolution that's transforming economies around the world. ■

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BROADBAND INTERNATIONAL

Europe's Global Challenge in Digital TV

Multimedia Home Platform standard could advance DVB, turn television set into multimedia terminal

BY DIETER BROCKMEYER

France's Canal Plus has invested heavily in its digital set-top systems to enhance its channel offerings.

Naysayers tend to call the emerging Multimedia Home Platform (MHP) standard nothing more than an extended remote control. While that is true to some degree, many believe that it is the key to making the European cable and telecommunications industries stronger players in the global market.

MHP is an extension of the Digital Video Broadcasting (DVB) standard. Once finalized, MHP will allow a digital set-top box to receive interactive services and provide users with Internet access. This would turn the TV set into a full-fledged multimedia terminal, similar to a personal computer.

"DVB already is a global standard, and by adding MHP it will become even more so," says Juergen Sewczyk, head of networks at German broadcaster RTL.

As soon as this autumn, the first "smart" decoders that comply with the MHP standard should hit the store shelves. However, those boxes won't boast a load of features. Sewczyk sees no problem with that. "It's always better in the beginning when the standard is more advanced than the early hardware, than the other way round," he says.

Because the MHP standard is indeed nothing more than a DVB-based applications program interface, or API, that's being made available to all DVB users, it's been dubbed the "extended remote control." The applications usually include electronic program guides (EPGs), which nearly every service provider makes part of its digital bouquet in order to provide easy navigation. But the future of these EPGs also lies in their ability to provide additional services, such as access to the Internet. All service providers may use the API; no license fees have to be paid. "This is a big step that will promote digital TV in Europe," says one industry executive.

The programming language being used for MHP is Sun Microsystems Inc.'s Java, which means that all the necessary hooks for Internet access are built in. Sun, which is often locking horns with arch-rival Microsoft Corp., again finds itself competing with the latter's Windows CE operating system to become the base language for MHP. "Picking Java was essential for the possible link to the Internet," says one source familiar with the final negotiations.

However, the parameters within which Internet access can be offered are not yet specified. "We are pushing hard also to take this step," says Albrecht Ziemer, a technical director with German public broadcaster Zweites Deutsches Fernsehen, or ZDF. During the upcoming July meeting of the DVB steering board in Geneva, these parameters are slated to be finalized.

All this may come as some surprise to opponents of a pan-European MHP project. Rumors spread quickly late last year that the project had failed. "Some digital-TV players, such as Germany's Kirch Group or France's Canal Plus S.A. had already invested huge sums in their own proprietary set-top systems," Ziemer explains. As a matter of fact, Canal Plus has already successfully implemented its MediaGuard and MediaHighway digital system across Europe and also closed some promising deals in the burgeoning Asia-Pacific region. In Europe, Canal Plus has enjoyed a stronghold not only in France (with more than 1 million digital subs), but also in Italy, the Benelux countries, Scandinavia, Spain and Poland.

And Kirch fought a fierce battle in Germany on the digital gatekeeper post, finally succeeding in making his Irdeto-based digital "d-box" the most-used set-top system in Germany. Presently, well over 1 million boxes are rented out to the subscribers of Premiere World, Kirch's digital pay TV platform. However, ARD, the second powerful chain of public broadcasters in Germany, has long tried to follow its own plan for expanding into digital TV. Together with a small group of companies, it's part of a group calling itself Free Universe Network, or FUN. The group promotes Open TV for its services, the same set-top box technology was also used in Great Britain by direct-to-home platform British Sky Broadcasting plc and in France by Télévision Par Satellite. The company, also known as TPS, is the most direct competitor to Canal Plus and reaches almost 1 million subscribers equipped with its set-top systems.

"We decided about a year ago to support MHP," says Hervé

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Around The World

ASIA

Cable and Multimedia Communications Ltd. (C&M), Korea's largest cable-TV operator, said it will deploy Terayon Communication Systems Inc.'s cable-data systems in Seoul. C&M, which passes 2 million homes and has more than 560,000 subscribers, said it anticipates a wide-scale high-speed deployment that will include as many as 100,000 cable modems and associated headends by the end of 2000. Terayon also has equipment pacts in Asia with Hong Kong's i-Cable, Japan's Jupiter Communications and China's Shenzhen CATV.

Singapore ONE, a provider of high-speed, interactive and multimedia applications, said it will provide its customers with access to Innovatv.com's interactive-video magazines. Under the terms of the deal, Innovatv.com will install video servers on the Singapore ONE network ATM backbone. Singapore ONE has also forged deals with On2.com, which provides full-motion, TV-quality video, and Online Media Group (OMG), which will supply the high-speed provider with interactive television and audio content. The agreements are part of an initiative of The Infocomm Development Authority of Singapore (IDA), which has earmarked $US90 million to stimulate the demand and supply of broadband content and services.

Austar United Communications Ltd., Australia's second largest pay TV provider with more than 370,000 customers, has selected Jones Cyber Solutions' (JCS') Intelligent Customer Support Systems (ICSS) software for the company's convergent-telecommunications services, including its mobile telephony and Internet service provider (ISP) businesses. Jones Cyber Solutions is the customer-care solutions brainchild of Glenn R. Jones, who founded Jones Intercable, once a top 10 cable MSO in the United States before it was purchased by Comcast Corp.

The Fantastic Corp. and SPH AsiaOne Ltd., the Internet arm of Singapore Press Holdings, have formed FantasticOne, a joint venture they call "Asia's first complete broadband-multimedia solutions provider for mass-market content." Headed by Paul France, who in 1993 launched Asia Business News, FantasticOne will develop inter-

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Europe,

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Cleff, product director of Canal Plus Technologies, in response to assertions that his group had slowed down the development of MHP. Also, at Kirch, where MHP was an issue for quite some time, company officials downplayed any controversy. "We supported DVB and MHP from the very beginning," states Geritt Huy, general manager of betaresearch GmbH, Kirch's technology development unit for digital TV.

RTL also used the Open TV system during its first steps into digital TV. Its EPG, called "RTL World," is designed for this system. "We keep using it to develop new applications," says Sewczyk. "But in MHP lies the future with the widest potential base of users," he adds.

Kirch's d-box is the most-used digital set top in Germany.

Manuel Cubero, who until last month was one of the overall technical general managers of Kirch, estimated it will take roughly three years for MHP to become the dominant standard in set-top boxes. The delay is because the conversion is more economic than technical. In the past, pay TV providers successfully pushed set-top boxes into the market primarily by renting them to their subscribers or even giving them away for free (as in the case of BSkyB).

Some industry observers note that MHP is already well on its way to becoming as successful as the DVB initiative already has. Years ago, the European Commission tried to promote new technologies by launching and financing their own projects. Examples of this include D2MAC or HDMAC, two technical standards the EC pushed as successors to the PAL color TV system. Those efforts failed, resulting in a fleet of satellites that today nobody uses, along with huge sums of European tax money being wasted.

Apparently, the EC learned its lesson. At the advent of DVB, the EC encouraged the industry to negotiate its own standard in order to avoid a war over systems.

This approach is showing signs of fostering wide acceptance of DVB, which many say has a chance to become a true global standard. It has been chosen by digital TV projects around the world, turning the European standard into a global one that competes with similar standards such as OpenCable and ATSC in the U.S. And MHP is poised to strengthen DVB's position even further. "We support MHP," says Romain Bausch, director general of Luxembourg's Societée Européene des Satellites S.A. (SES).

Last year, SES became a major shareholder in Hong Kong-based Asia Satellite Telecommunications Ltd., which recently launched its interactive business-to-business satellite platform employing DVB/MHP.

However, any hope that it will become the sole global standard is a notion too optimistic for even the biggest DVB optimist. "There will be a number of global standards existing side by side," says Cleff of Canal Plus, referring to standards such as OpenCable. "However, they will be pretty similar, making it easy to import an application from one standard into the other." ■

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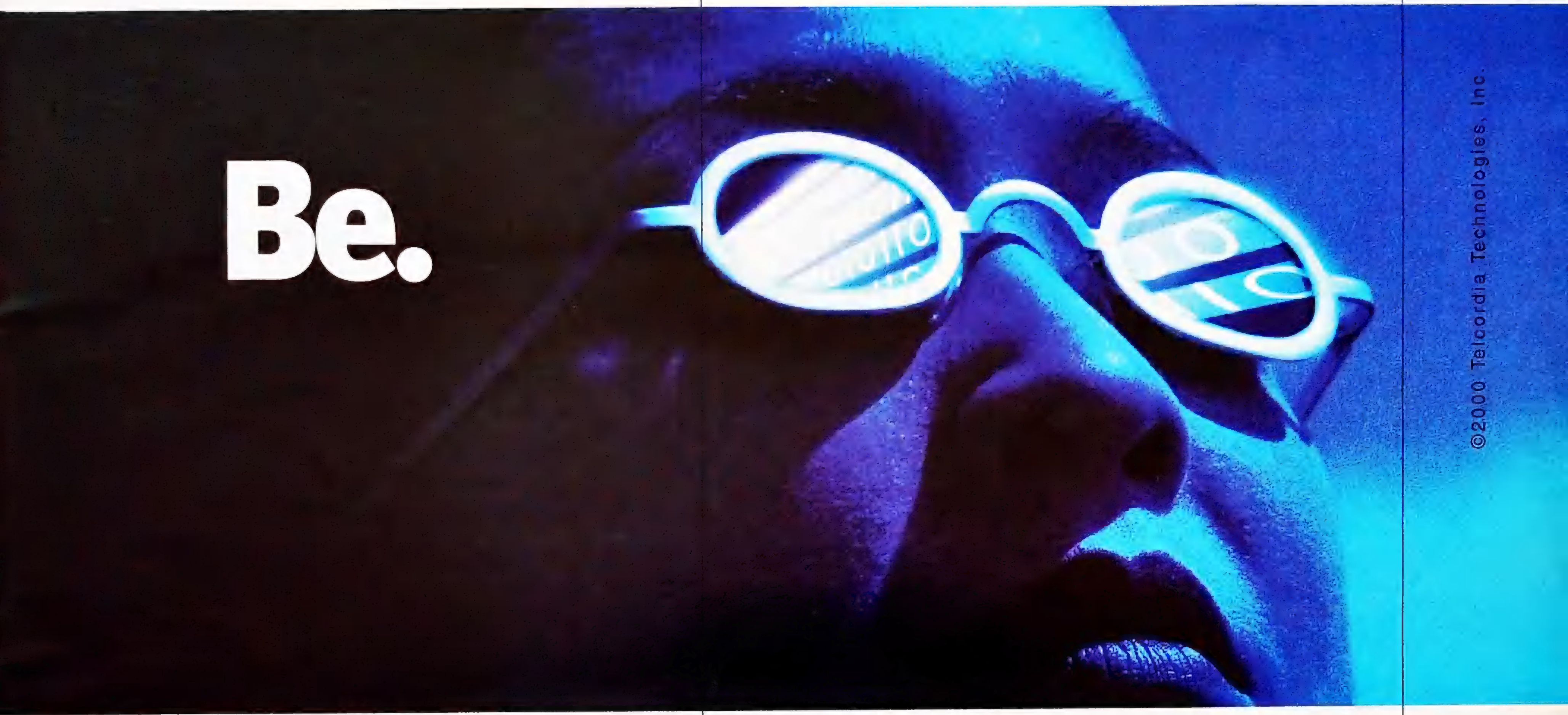

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NCTA,

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technical groundwork that will guide the development of new products. It's all aimed at providing "the best possible consumer experience of cable services while connected to home networks," CableLabs executives said.

"The fundamental advantage of cable is its bandwidth, and AT&T Broadband is keenly interested in the ability to offer in-home networking products for consumers that recognize the bandwidth and service platforms available on the cable network," explained Tony Werner, executive vice president, engineering and technical operations, and chief technology officer at AT&T Broadband, a key leader of the project.

"CableLabs has been very successful in establishing the CableLabs Certified cable modem, OpenCable and PacketCable platforms that deliver cable customers advanced broadband data, interactive television and multimedia services," added Mark Coblitz, Comcast Corp.'s senior vice president of strategic planning. "We now want to replicate that efficiency and rapid deployment with cable-optimized, in-home networking products and services."

Right on cue, SOHOware Inc. demonstrated its Broadband Internet Gateway (BIG) at the show as a part of its overall broadband product line. The residential gateway comes into play anytime two or more PCs are used simultaneously. SOHOware's BIG enables one IP account to be shared, and allows operators to charge a fee for multiple users, eliminating the need for consumers to bear the cost of individual accounts for each user.

SOHOware also announced that it will manufacture and market its own branded cable modem, the CableStar DOCSIS modem, which joins a family of products designed for home networking. The CableStar modem is packaged with a CD-ROM that provides a self-installation tutorial and troubleshooting software for either consumers or cable operator service personnel, guiding them through the installation and operation process. The software will determine if a subscriber's computer meets minimum specifications, if the network interface card is properly configured, if the cable modem is functioning and connected to the network interface card, and if the modem's provisioning status and performance are up to specification.

Taking it one step further, MediaOne's Road Runner high-speed Internet-service customers can now purchase home-networking products online from SOHOware under an agreement forged by the two companies. The deal includes inter-company Web site links to facilitate consumer education, shopping, purchasing, information about promotional offers, and other aspects of residential network solutions.

Heavyweights of the U.S. cable industry get a glimpse of the products on display at the National Show.

Road Runner currently offers home networking in several markets for an additional fee, which provides the ability to access the Internet from up to three computers at the same time. In these areas, customer Web sites now include information on a variety of SOHOware home networking products that enhance this feature. Additionally, SOHOware has added MediaOne-specific content to its educational site with purchase incentives for Road Runner customers and information about SOHOware products.

Meanwhile, Motorola Inc.'s Broadband Communications Sector (formerly General Instrument Corp.) officially launched its PL 100 Multi-User DOCSIS cable modem at Cable 2000. The CableLabs Certified home-networking device provides DOCSIS capability along with Internet sharing and home-area networking over telephone wires. It provides broadband-Internet access over hybrid fiber-coax and distributes it to multiple devices in the home through ethernet, USB and home phone networking al-

Mediacast Attracts a Crowd to Earls Court

BY CHRIS FORRESTER

London's Cable & Satellite Mediacast show made its Earls Court swan song last month an event to remember, as it prepares to move to the city's trendy Docklands area next year. The space allotted for exhibitors was up 20 percent over last year, and the number of first-day visitors stood at 3,300, also up 20 percent from 1999, according to show organizers. In addition, visitors from overseas accounted for 48 percent of total attendance, compared to 40 percent last year.

Adding "Mediacast" to the event name a few years ago has certainly helped attract new players; alongside the traditional exhibitors like Societeé Europeene des Satellites S.A. (SES) and Echostar Communications Corp., there were a slew of dot-com companies offering technology solutions for cable, satellite and digital subscriber line content delivery.

The satellite providers SES and Eutelsat both emphasized broadband delivery of Internet-type content, while Echostar's presence was increased in size with an upgraded range of digital satellite positioners and receivers, with and without hard-drive access. A sign that Echostar's international commitment is stronger than ever is seen in its acquisition last year of U.K.-based Eldon Engineering Ltd., which is now helping Echostar's internal research-and-development work. Eldon was also present at the show.

One of the more visible booths belonged to Luxembourg-based Europe Online Networks S.A. (EOL), which uses the SES' Astra satellite system to deliver Internet and streamed content downloaded at up to 2 megabits per second. It claims about 50,000 subscribers, and uses four Astra transponders. According to EOL director of corporate communications Simone Steinmetz, it will need "at least 10 transponders by the end of the year." EOL also says it expects to have 150,000 subscribers by year-end.

The company's product range includes high-speed downloading of Internet content, with special emphasis on games, music and films, as well as news. EOL has existing content deals with the likes of Microsoft Corp. and Alta Vista. So far, EOL has taken a wide view on what should be "pushed" to subscribers. That, says Steinmetz, is about to change. "We are now producing more of our own content, and we started with music, which we saw as an easy route for us. We will Webcast live concerts, like the upcoming June 20 concert of one of Germany's super groups Einsturzende Neubauten," she says. "Now we are talking to Franco-German channel Arte about Web-casting an opera. We have taken the primary rights to these events and are allocating sub-rights to conventional telecasters."

Steinmetz says EOL is thinking carefully as to how it should proceed next. While no final decisions have yet been made, music over the Internet is clearly a high priority for EOL. "We have to own a specific space in the consumer's mind," she stressed. "Music is international. It has no language problems and our surveys suggest the combination of broadband video with high-quality audio appeals to subscribers."

She added that EOL's current capacity, which all comes from Astra's 19.2 degree East orbital position, will shortly be boosted by additional capacity targeting the U.K. from Astra's second position at 28.2 degrees East. The company also plans to focus more on "cable distribution, retail and pay-television to get to that mass market," Steinmetz says. She adds that EOL will have services in place specifically for the U.K. market by the end of the year. "Without capacity, there is little we can do, but potential British users will know about us."

Programmers were thin on the ground in what is largely a technology show, but United Pan-Europe Communications N.V. was present, seeking distribution deals for its UPCtv channels. Telenor Conax A.S., a division of Norwegian telco Telenor A.S., was doing much the same for a group of niche channels on behalf of Prime TV of Pakistan, ORT International of Russia, TV Finland, Norway's NRK International and Denmark's DR1.

liance (HomePNA) ports, which can be active simultaneously.

Internet sharing is enabled through a Motorola-developed network-address translation and dynamic host configuration protocol server that resides in the modem. The modem's software can also block incoming traffic to PCs in the home, providing functionality that's equivalent to a firewall.

There was plenty of deal-making going on related to interactive TV and video-on-demand as well. Microsoft Corp. and VOD equipment provider SeaChange International Inc. agreed to collaborate to extend Microsoft's Windows Media Technologies from broadband-Internet delivery to cable- and broadcast-television systems. As part of that agreement, Microsoft took a small financial stake in SeaChange.

According to Microsoft, the partnership will create a digital-media platform that delivers video streams to both television and broadband-Internet networks via a single-server system. Under typical conditions, television and broadband-Internet networks require separate server systems. The new arrangement promises to lower costs and maximize reach for content developers, including the film and video industry.

By tapping SeaChange's streaming systems, Microsoft said, its Windows Media Technologies will enable cable networks and broadcasters to deliver high-quality video via the PC or the television.

ICTV introduced Digital Lite, an upgradeable headend solution for Internet e-mail and basic interactive content. The system is designed to meet the needs of MSOs that prefer to begin the roll-out of ITV services with a limited, entry-level offering to the consumer. Such services might include e-mail and simple interactive content such as local weather, traffic advisories, sport scores, personalized stock quotes and news.

The Digital Lite system will work on any set-top and requires no special software or middleware in the set-top, according to the company. Digital Lite system capabilities include e-mail, Web page broadcasting, "walled" interactive content, operator-generated HTML content and VOD user interfaces.

ICTV says the one-time capital equipment cost is the equivalent of $US25 to $US35 per subscriber for the average system. The system can be upgraded to a full implementation of ICTV's digital-broadband capabilities, including Internet browsing, full streaming media and access to CD-ROM-based applications.

ICTV's basic interactive services platform is based on shared use of Pentium-based PC clients located at the cable operator's headend. The clients are switched from user to user on an as-needed basis, resulting in amortization of life-time client cost over multiple users. Each PC is connected to both the Internet and local content servers over a 100 Mbps Ethernet. Access to locally stored content is virtually instantaneous, according to the company, and can support any plug-in, streaming media and full-motion, broadcast-quality video.

VOD provider DIVA Systems Corp. and Time Warner Cable inked a deal that determines the design, development, testing and integration of VOD hardware and software for Pegasus, Time Warner's interactive platform.

Canal Plus U.S. Technologies got into the act by highlighting key interactive-television demonstrations based on its MediaHighway middleware and MediaGuard conditional-access system. As an open system, MediaHighway is designed to comply with specific commercial requirements and international standards such as DVB-MHP, OpenCable, ATSC, ATVEF and DAVIC.

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NCTA,

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Canal Plus also showcased its Mosaic Interactive Navigator, a video browser that offers easy access to 60 different TV channels, and its commercial VOD service.

Canal Plus also allied with Wink Communications Inc. to integrate Wink's Enhanced Broadcasting and impulse response functionality with Canal Plus Technologies' MediaHighway middleware.

Intertainer Inc. and Concurrent Computer Corp. forged an alliance that calls for the melding of Intertainer's Broadband Entertainment On Demand network with Concurrent's VOD platform. The combined offering will enable the Intertainer service, which manages a large programming library from several film studios to run on all new and legacy Motorola and Scientific-Atlanta Inc. set-top boxes, the companies said.

Intertainer also hooked up with SeaChange to develop a collaborative end-to-end VOD system. The integration of Intertainer's broadband network with SeaChange's ITV System will enable the Entertainment On Demand service to run on Motorola's DCT-5000+ set-top box. The integration will be facilitated by Microsoft TV Advanced, a client software for advanced set-tops. Digital Video Arts (DVA), a subsidiary of SeaChange, will be responsible for developing the integrated platform. In addition, SeaChange and Intertainer will integrate the ITV service into Motorola's entire range of set-top terminals.

TWIN Entertainment, a joint venture of Interactive Network Inc. and U.K.-based Two Way TV, made its debut at the NCTA show with a demonstration of enhanced TV and real-time competitive games and sports applications.

TWIN's technology is currently being deployed on European digital TV systems and allows the creation and management of live, scheduled interactive-TV content all day, every day, the company says. The service is expected to be available in the U.S. and Canada soon.

The technology delivers simultaneous entertainment and interactive services across multiple networks and all software platforms, such as OpenTV Corp., Liberate Technologies, Microsoft TV and Sun's Java TV. It allows up to four players in each household to play simultaneously and compete for prizes.

Consumers will be able to view, organize, enhance, share and order prints of their digital pictures using their TV sets as a result of an alliance between Scientific-Atlanta and Eastman Kodak Co. The two companies have signed a letter of intent to collaborate on the development of an interactive, photo-sharing, television-based service for S-A's Explorer platform.

When development of the new service is complete, consumers will be able to access the service through their televisions using S-A's Explorer set-tops and interactive digital network and Kodak's networked-printing infrastructure. Trials of the new service are expected to begin this fall.

The service will allow consumers to transfer images from a digital camera plugged into the Explorer set-top; send pictures to be printed at Kodak's Internet photo-finishing service; enhance pictures by adding text messages, cropping or making other improvements, such as removing red eye; and publish images on the World Wide Web.

Also, DemandVideo will be working with Aptus Networks to provide VOD services, allowing Aptus to represent them as a potential anchor tenant on various municipal area networks in the U.S. and Canada.

Aptus works with utilities and government organizations to design, build and operate broadband networks. Strategic equity partnerships already established by Aptus include Memphis Light, Gas and Water and the City of Burlington, Vt. These partnerships will provide "open access" to companies offering local telephone service, high-speed Internet connections and cable-television services such as VOD.

Finally, TeleCruz Technology Inc. and YACK.com announced a partnership that will integrate the Yack Internet Program Guide into TeleCruz's open technology platform for interactive television. TeleCruz provides TV manufacturers with open hardware and software platforms that enable interactive capabilities within the television. The alliance with YACK.com offers an interactive Internet content guide which consumers can use to locate the best live, on-demand and cached Web programming, according to the companies. TeleCruz has established deals with television manufacturers, including four of the top-10 TV OEMs, it said. ■

Around The World

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active and enhanced content for satellite, cable and digital-terrestrial network operators. Fantastic Corp. provides data-broadcasting software solutions for companies such as Deutsche Telekom A.G., British Telecommunications plc, MTV Europe and Telecom Italia SpA.

Modi Entertainment Network (MEN), a conglomerate of entertainment businesses in India, said it will deploy ICTV's interactive-television (ITV) platform during the third quarter of 2000. According to MEN, ICTV's thin-client, headend-based ITV platform suits the country's demographic and technological makeup, because less than 1 percent of homes in India have personal computers.

■ EUROPE

Motorola's Broadband Communications Sector (formerly General Instrument Corp.) and Interactive Enterprise Ltd. have entered a global-marketing partnership that will Interactive Enterprise's CONEXON provisioning and mediation software as part of Motorola's end-to-end broadband solution. The combination, which marries Motorola's DOCSIS and proprietary cable-data system to CONEXON'S software, will allow MSOs to offer customers self-install devices for high-speed data and digital television, and reduce truck-roll costs by more than 40 percent, the companies said. Motorola and Interactive Enterprise already have struck a deal with NC Numericable, France's second-largest cable operator.

Casema, the third-largest cable operator in The Netherlands with 1.3 million subscribers, said it will offer telephony services using Terayon Communication Systems' Multigate broadband voice-over-Internet-protocol (VoIP) system. Casema, which is owned by France Telecom S.A., has already deployed Terayon's broadband telephony systems in central and southwest Netherlands, and has been expanding its broadband portfolio with high-speed Internet access, video-on-demand and telephony services. In addition to Casema, Belgium's Telenet has deployed Terayon's Multigate platform.

Com21 Inc. has selected Conexant's InfoSurge CN9414 cable-modem reference design to develop products supporting the Digital Video Broadcast (DVB), Digital Audio Video Council (DAVIC) and Euromodem industry standards. Com21 said it is basing its next-generation DVB/Euromodem products on an enhanced version of Conexant's "single chip" cable-modem reference design, which Conexant is co-developing with Cisco Systems Inc. According to Com21, Conexant's reference design simplifies and speeds the development of products that interoperate with cable network infrastructure equipment in Europe, China, Latin America and other markets.

OpenTV Corp. said it has furthered its European strategy by winning an interactive television (ITV) software deal with PrimaCom, Germany's third-largest independent cable operator. Using OpenTV's third-generation operating system, EN2, PrimaCom said it plans to launch its first ITV services next month in Leipzig, giving those customers access to OpenTV-enabled applications like interactive pay-per-view and electronic-commerce. Eventually, PrimaCom will deploy OpenTV to its 1.35 million subscriber base, including customers in the cities of Magdeburg, Chemnitz, Halle, Aschersleben, Naumburg, Mainz and Wiesbaden.

ONdigital, the British digital-terrestrial TV company, said it ended March 2000 with 673,000 subscribers, up 22 percent since December 1999.

Skills,

Continued from Page 25

Those professional skills now include a solid mixture of technical knowledge and the ability to apply it to a converging set of Internet, data, computer, telephony and cable-TV services, and at the same time display a caring customer-service acumen. That combination, experts admit, is rare.

"The topic for operators is that there's definitely a need for new skill sets, especially at the international level, because they've never needed the whole range of technical skills and customer interaction. There's a whole lot more to running a service," says Dee Dee Nye, vice president of cable communications for Lucent Technologies Inc., a global provider of cable and telephony equipment and fiber.

DeltaKabel TeleCom C.V., Lucent's newly acquired multi-service company in the Netherlands, is financially supporting local school programs and offering on-the-job training, a necessity in today's brutally competitive recruiting environment. "Our customers are looking for transferable skills from other industries, and it's very competitive from country to country," Nye says. "We now have a full professional services team in Europe that can offer installations and after-service care and need a good balance of new recruits, mid-career hires and cable industry experts, but the talent war is very tough."

Just entering the war for international talent is Scientific-Atlanta, Inc. (S-A), the U.S.-based supplier of broadband-communications systems. Its newly created SciCare Broadband Services group is quickly expanding into the global market and is designed to provide resources, processes and knowledge to the burgeoning worldwide multimedia market.

"We are actively planning for the new skill sets needed in our foreign markets," says Larry Bradner, president of SciCare Broadband Services. Those plans, Bradner maintains, include the eventual addition of SciCare to its subsidiaries in Denmark, Italy and the U.K. "If we can find someone with raw skills like [Internet-protocol] telephony, delivery and support of software and passive optical technology, we can teach them pretty quickly about the broadband space," Bradner says.

S-A will begin developing its SciCare group in Europe in July, 2001, Bradner notes. In the meantime, a relatively steep learning curve must

be negotiated before the group opens its door for business in Europe. Continues Bradner: "Frankly, the learning curve wasn't that steep, and could be picked up easily, but that doesn't work well now."

The reason is simple, Bradner concludes. "The pace is staggering on the HFC-network side with fiber technology, digital and cable-modem subscribers, and IP telephony, and we knew we were having difficulty keeping pace with the changes and technologies, so we have to replicate our physical labs around the world and address multilingual classes," he said.

Addressing the speed to market issue is a factor in the skill set search as well. Competition to be first to market and gaining an early brand recognition advantage is becoming vital to a multi-service company's business model, and pressing more companies into a near-desperate demand situation for employees with cable, telephony, computer and Internet technical skills.

"Most multimedia companies now realize how fast they need to get to Internet services, and their business product groups know they need additional skill sets," says Joe Fabrizio, president of New Era Of Network's (NEON) newly formed Global Learning Group.

NEON, an e-business infrastructure-platform provider, is forming the group to address the growing international skill set demands. "We found that our customers had much to learn about certain basic skills regarding architecture, and we wanted to put management teams around that and grow it internationally. It's a different game now and companies must be able to move fast," Fabrizio says.

With the serious shortage of qualified staff, however, NEON is facing an all-too-familiar scenario: tracking down and hiring skilled recruits. Says Fabrizio: "Finding good skills in a tight labor market is very difficult. There are small pockets, but it's a global issue. Our business model is to provide training for the skill sets necessary to put together e-commerce architecture and businesses, and our staff will triple each of the next two years and then double the year after."

Just where that staff comes from, however, is NEON's next great challenge. "We're focusing on anyone who wants to learn," Fabrizio adds

Most of those people, experts say, will be nearby employees. "Local people know the local environment and have the needed skill sets locally. That's where we really need them. We can train them on current technologies and use them as trainers," said Ham Mathews, director of marketing for ADC Telecommunications' Broadband Networks Division.

Yet certain barriers remain in the recruitment and retention of local employees by foreign companies. "There are sets of communications signals that you don't get when working with local people, and companies in each country have different business models. This is where new skill sets are so important," Mathews says.

Lucent, an emerging player around the world, believes in the local skill set approach as well, but with a caveat. "We're doing lots of optical work in China and almost always use local people. That's been successful for us. But you have to have a plan for skill sets and must match the needs for people and talent or you're behind the eight-ball," Nye says.

She adds that the same technologies driving the need for additional skill sets are also attracting skilled recruits, an odd twist to the skill-sets issue. "The introduction of new services and technologies like modems is helping attract skilled people," she notes.

The Internet, Bradner points out, has become a welcome lifeline for companies in the recruiting war. "It's a very powerful tool, and is helping us recruit as we build SciCare. But we have a long way to go." ■

New Products

Ingress-monitoring software

Trilithic Inc. has unveiled a number of new products, including its IngressManagR Release 3.0, which adds SNMP compatibility and other features to the company's ingress-monitoring software. Used with the company's 9580 SST and 9581 SST Reverse Path Analyzers, the new software executes programmed alarms when ingress is detected. IngressManagR 3.0 also supports TraffiControl, a feature that lets the 9580 and 9581 SST analyzers detect ingress anywhere in the return spectrum, even in bands occupied by services.The new Guardian 9581 SST return-path analyzer has all of the advantages of the 9580 SST, plus frequency coverage extended to 65 MHz, and the number of test points has been raised from 8 to 16. The unit still takes up the same 3.5-inch rackspace.

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Ruggedized air filters

Universal Air Filter Co. has introduced a new Ruggedized Air Filter line designed to provide enclosures with reliable thermal management, EMI shielding and particulate protection for harsh indoor and outdoor environments. The line is designed to withstand harsh environments, including those where high temperature, high humidity, chemicals or solvents are present. The filters incorporate a coated polyether urethane foam media known as Quadrafoam II, which is more rigid than typical filter materials in order to sustain its open-pored cellular structure and maintain performance characteristics, despite the presence of heat and moisture.

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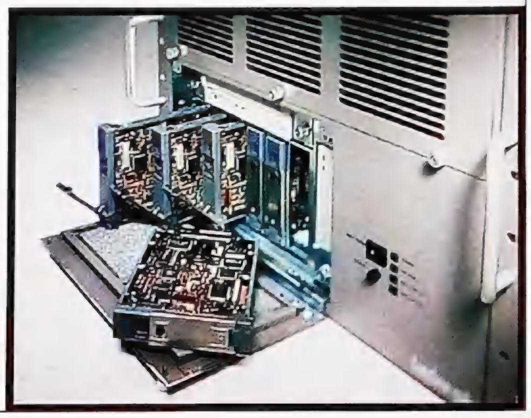

Demodulator

Videotek has introduced a new high-performance demodulator, the DM-200A, designed as an alternative to the DM-200 for users who don't require the quadrature output, according to the company. The unit includes an easy-to-read front-panel display, intuitive controls, a broad range of channels, full time stereo and SAP outputs. The demodulator is suited for cable headend operators because it includes all preprogrammed channel tables for broadcast, standard cable, HRC and IRC frequencies.

Features of the units include full FCC 4.1 MHz bandwidth video for compliance testing; better than 58 dB video SNR; multiband tuning (VHF/ UHF/cable with HRC/IRC offset capability); synchronous detection and a full, five-year warranty.

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Aerial equipment

Brink's Mfg. Co. Inc. has made new, speedier additions to its Van Ladder Aerial Equipment line. The new Van Ladder Trailer Unit, as well as the Model 2921-TRS and Model 3522-TRS, have twice the lift speed, 50 percent faster extension and two-speed rotation, as compared to the company's previous-generation models. The new models are all-electric, and the 2921 has a 35-foot working height, with a 21-foot side reach, while the 3522 has a 41-foot working height, with a 22-foot side reach.

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BLIPS ON THE SCREEN

Argentina,

Continued from Page 6

dropped from the metropolitan Buenos Aires market in 1999, after the programmer failed to agree on network license fees with the two MSOs there. That, plus a first-time sales tax on cable of 10.5 percent — which is being passed on partially to the subscriber — has hardly sat well with consumers.

The cable companies argue that the current controversy has been exaggerated by the media. For starters, home games have never been televised live except on rare occasions when a match was sold out, says CableVisión programming director Carlos Claiman. Second, the games will continue to be distributed to CableVisión and Multicanal clients in the country's interior as part of a basic service. Furthermore, away games will be shown nationwide without any extra charge. And for non-cable homes, the MSOs have conceded to their open-air rivals the right to televise the 18 games — nine home and nine away — with a mere 45-minute delay.

Another misconception, Claiman says, is that the MSOs are hoarding these valuable transmission rights for themselves. Broadcast TV was given first-right option to buy, he says, but eventually decided against shelling out the lofty $US15 million asking price eventually paid by each of the MSOs for the home games.

"If there's a culprit in this whole affair, it's the football associations in each country that keep jacking up the price for sports rights," adds Jacques Kremer, president of recently launched, HMT&F-backed Panamerica Sports Network.

Actions from Congress' lower house have also sparked a wave of criticism. "Soccer is a business like any other, and the cable companies have just as much of a right to profit from it as supermarkets do from the selling of food, while millions of children go hungry every day," argues Fernando Niembro, one of Argentina's most respected sports commentators. "I haven't heard of any bills demanding that supermarkets give away food."

Regardless of where the blame lies, the truth is that Argentina's MSOs appear far from happy with their hefty investments. They decline to comment on how many of their combined 3.2 million customers have opted to sign up for $US6 per game, or $US36 for all nine home games. Well-placed insiders say that with consumers hard pressed by the economy's slow recovery from its worst recession in a decade, demand for the games has been sluggish a best.

An even greater concern, however, is that the negative media exposure could hamper efforts by the two MSOs to fully implement tiered programming — something that has eluded them for several years. "The goal was never to make our World Cup coverage a profitable venture in itself, but to insert the pay-per view concept in Argentina once and for all," explains Claiman. "This controversy doesn't help."

Certainly, the MSOs must win over the public to such offerings if they are to make them profitable. Right now, however, the outcome of that particular proposition looks as uncertain as Argentina's ability to win the 2002 World Cup. ■

Russia,

Continued from Page 6

central Moscow square on May 17 to protest the raid and defend freedom of speech.

Prominent legislators and former dissidents addressed the crowd, warning of a return to the Soviet past. Sixty-two Russian media organizations came together to produce the *Joint Newspaper* — a tradition that dates back to 1991 and is revived during crackdowns on the media.

The organizers said the raid fit into a pattern of government attempts to gag the independent media.

This winter, Radio Liberty correspondent Andrei Babitsky was arrested by Russian authorities in Chechnya, where he had covered the war, drawing particular attention to human-rights violations committed by Russian troops. Babitsky was held incommunicado for a month.

Other, less-prominent media have seen their journalists assaulted, computer files stolen and regional editions censored.

In recent months, the much-feared Press Ministry has gone after TV Center, a station controlled by Moscow Mayor Yuri Luzhkov and distributed by satellite and over the air. Luzhkov recently pledged loyalty to Putin, but in December's parliamentary elections he ran in opposition to the Kremlin. Luzhkov's party was all but squashed by a vicious campaign against him and his allies on state-run television.

Citing violations that the station denies, the Press Ministry has decided not to renew the station's license automatically, instead holding a tender for the frequency set for May 24.

TV Center officials have portrayed the conflict as yet another attack on the independent press. The station participated in the *Joint Newspaper*, and their supporters attended the protest.

However, as Luzhkov's mouthpiece, the station can hardly be called independent. As has often happened in the past decade in Russia, conflicts between rival political clans are being played out through the media they control.

Media-MOST has played this game, too. During the 1996 presidential elections, NTV's favorable coverage helped secure Yeltsin re-election. During last year's parliamentary elections, the station offered a boost to Luzhkov and liberal candidates, albeit nothing close to the pro-Putin propaganda on state-controlled channels.

The prosecutor's office says the agents who raided Media-MOST were looking for evidence in connection with a case against the company's security department for allegedly eavesdropping on high-ranking government officials. But Media-MOST officials say the allegations are bogus and the raid is a simple case of revenge for journalistic independence.

"It is obvious that what is happening is a factor of political pressure," Media-MOST majority owner Vladimir Gusinsky told NTV on the day of the raid. "It is insulting that a few days after a new president of Russia took office, a president with whom many people in Russia link a rebirth of the country, it seems as if everything is going backward."

In a country where much of the media continues to fulfill propaganda functions, Media-MOST has been a pioneer in turning the media into a profitable business. In addition to NTV, Media-MOST holdings include satellite channel NTV-Plus, second-tier network THT, Ekho Moskvy radio and the Sem Dnei publishing house, which puts out the daily *Segodnya* and the weekly news magazine *Itogi*, published in cooperation with *Newsweek*. Last year, the company bought a 17.3 percent stake in Central European Media Enterprises Ltd., a U.S.-investor-funded company that operates television stations in Eastern Europe.

Gusinsky's relations with the Kremlin have been worsening for the past six months. State-controlled creditors have begun calling in loans. According to an account published recently in *The Washington Post*, President Vladimir Putin in April personally blocked the all-but-clinched sale of a bank affiliated with Gusinsky to a state-owned bank.

Oleg Panfilov, director of the Center for Journalism in Extreme Situations, explains that major Russian companies "form their security services from former KGB employees. I cannot say that [Media-MOST] were not involved in eavesdropping, but I'm sure what happened [on May 11] was political." ■

Summit,

Continued from Page 6

ators in Latin America are at odds on several fronts as the market consolidates.

At issue is pricing pressure, panelists explained during the second session, "The Changing Landscape in Latin America." (See related story, page 14.) While operators are trying to lower per-subscriber rates, programmers counter that there's only so much meat to hew from the bone.

Simon Kenny, executive vice president of broadcasting at Walt Disney Television International Latin America, noted one factor contributing to the pressure. Advertising-sales efforts at the operator level haven't kept up with the ongoing consolidation, he said. But that gap is closing for some,

Discovery Communications chairman John Hendricks discusses industry issues at MNI's Summit 3.

offered Ahmad Khamsi, president and CEO of SuperCable, a Venezuelan operator with about 125,000 subscribers.

While SuperCable "broke its back" three years ago to reach $US1 million in ad revenue, said Khamsi, the MSO sold $US3 million the second year, $US8 million the next, and is anticipating even loftier numbers in 2000.

Industry insight continued at the Summit's third session honoring the winners of year's Ground Breaker awards, which recognize outstanding achievements in various sectors of pay TV.

André Chagnon, head of technology award winner Canadian MSO Le Groupe Vidéotron Ltée., noted that with so many new developments, companies should work to make their solutions software based. That, he said, would enable operators to save costs and more easily rollout new services.

According to Grand Prix winner John Hendricks, Discovery Communications Inc.'s chairman and CEO, bigger isn't always better. Advancements in VOD will enable consumers to buy select, targeted programming, he predicted. What's more, such "mini downloads" of content could emerge as an key revenue source for programmers, he said.

The dry but important issue of regulation also arose during the panel. UnitedGlobalCom Inc. president Michael Fries predicted that European regulators would not move to regulate Internet-service provider access to the cable plant. That's a hot topic in many markets. And it's especially important for UGC's United Pan-Europe Communications N.V., whose chello broadband N.V. high-speed Internet service won this year's marketing award.

"The European Union wants to stimulate an alternative infrastructure," Fries said.

Jeff Baumgartner, Craig Kuhl and Mike Galetto contributed to this report.

Broadband Connections

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ONE ON ONE

Rearing a Rich Kid

JANET STILSON TALKS WITH YNON KREIZ

It could well be said that Fox Kids Europe N.V. (FKE) was born with a silver spoon in its mouth. The programmer is endowed with product from one of the world's largest children's libraries through its corporate parent Fox Family Worldwide. And through one of Fox Family's owners, News Corp., it has ties to an increasing number of European direct-to-home platforms.

But this isn't some rich-kid slacker. In the six months of results following FKE's November 1999 initial public offering on the Amsterdam Stock Exchange, the company's earnings before interest, taxes, depreciation and amortization, or EBITDA, leapt more than 180 percent. And while it reported losses of $US4.8 million for that period, chairman and CEO Ynon Kreiz says all of the business lines, including consumer products, program syndication and the channels' Web activities, are EBITDA positive. Those results come three years after FKE's launch.

Right now, FKE's channels reach more than 20 million households in 12 languages, and its syndicated programming is in 33 markets in Europe and the Mideast. The company recently launched in Italy on the Stream platform, and now has its eyes fixed on a debut in Germany before year's end. What's more, it's handling marketing and affiliate duties in Eastern Europe for corporate sibling Fox Sports.

All told, the separate endeavors seem as demanding and energetic as a class of kindergartners. So it's just as well that Israeli-born Kreiz is a mere 35 years old. In the following edited interview, he explains how he's keeping the ventures focused and moving further forward.

STILSON: Why is it that your Fox Kids unit is the only one that did an IPO? What makes Fox Kids Europe different than its counterparts in the United States and Latin America?

KREIZ: I think the other regions did quite well. The difference in Europe is that the business started as a very self-contained, integrated unit that was able to act very locally on the growth, and ride also the growth of pay TV in Europe. What we offered was something that was never done before, in terms of the extent of localization, combined with quality content and strong packaging.

On the back of that we integrated into the channel group the distribution of content, consumer products and online activities. That's the vehicle that we then took public.

STILSON: Can you tell me about the separate unit you've created for Internet activities?

KREIZ: What we're doing is creating another operating division within our group that will become — is — a business center, a profit center, from all aspects. So that we expect that division to be profitable in it's own right. This is how we're to run it, as opposed to a promotional platform for other businesses.

Now there's a lot of content that's unique to the sites. The strategy from the beginning was a guerilla approach, of "everybody get on the ground as soon as you can," whereby every channel basically launched a Web site. And now what we're doing is consolidating all the Web sites, with the intent of moving all the sites to one facility, using a common technological architecture and content platform. That will enable us to provide a pan-European model that is branded and has a strong pool of content, without compromising our local approach.

It cost us only $US250,000 to achieve a position where we are a market leader in the online space. The reason is we own our content and have the ability to promote on our channel platform. Clearly, promotion and access to content are the two most expensive items in developing any Internet business.

STILSON: Are you looking for certain partnerships or acquisitions?

KREIZ: We are looking for alliances in all areas that we operate in. But you'll see more transactions in the online environment and also content we can deploy in both traditional media and new media. The beauty is that we're able to leverage and cross promote one business line onto another.

STILSON: The U.K. is a bit of a weak spot for Fox Kids in the viewership area. Is that situation changing?

KREIZ: We're now being measured separately between analog DTH (direct to home), digital DTH and cable. We get the ratings separately. And the only platform where we're competing on an equal par with our competitors is digital DTH. With the advent of electronic program guides, all of the channels are presented in front of the viewers and they make a choice, as opposed to analog distribution where you have a particular number with a frequency, and then you are disadvantaged if you have a high number.

We found with (digital DTH), consistently from the beginning of the year when we started to get this information, that we have closed the gap and are currently competing almost neck-and-neck on digital DTH, whereas Cartoon Network is ahead of us by a factor of five on analog DTH.

We are confident we will close the gap, and we're working very hard to achieve that with improved content and more initiatives that will make the channel very relevant to the U.K. audience.

STILSON: When do you expect to have distribution on the two dominant U.K. cable operations?

KREIZ: I cannot comment on that, but ultimately we expect to have no less distribution than all of our competitors.

KRIEZ

YNON KREIZ

TITLE:
Chairman and CEO, Fox Kids Europe N.V.

BACKGROUND:
After working as a wind-surfing instructor and earning his MBA, Kreiz became a director of business development at Saban Entertainment in 1994. Following a succession of increasingly more distinguished titles, he moved to Europe in 1997 to become managing director of Fox Kids Europe. A few promotions later, in November 1999, he attained his present position.

STATISTICS:
35 years old, single, based in London..

STILSON: The German market, which Fox Kids is about to enter, isn't an easy one for children's channels. Nickelodeon retreated from a full-channel strategy some time ago, opting for program distribution alone. What makes you think you can succeed where others have stumbled?

KREIZ: Let me say what made us successful so far, and that's exactly what we're going to do in Germany. There are basically three elements to our strength. One is our programming library, which is one of the strongest libraries of kids' programming in the world. The second element is our localization strategy. And the third point is the activities we do around the channel. It's a combination of competition, outdoor events and various off-air activities that basically create a whole environment, a home, for kids

This made us number one in Holland, in France, in Spain, in Scandinavia, and also in a very competitive position in Poland and Eastern Europe, where we're not fully measured yet.

STILSON: Do you mean number one among satellite-delivered TV channels that cater to kids?

KREIZ: Yes, except in Holland where we're measured nationally against everyone, including the terrestrial stations, because we do broadcast nationally.

STILSON: Can you give me a projection on future subscriber growth?

KREIZ: We expect within two or three years to be in more than 30 million homes in Europe and the Middle East.

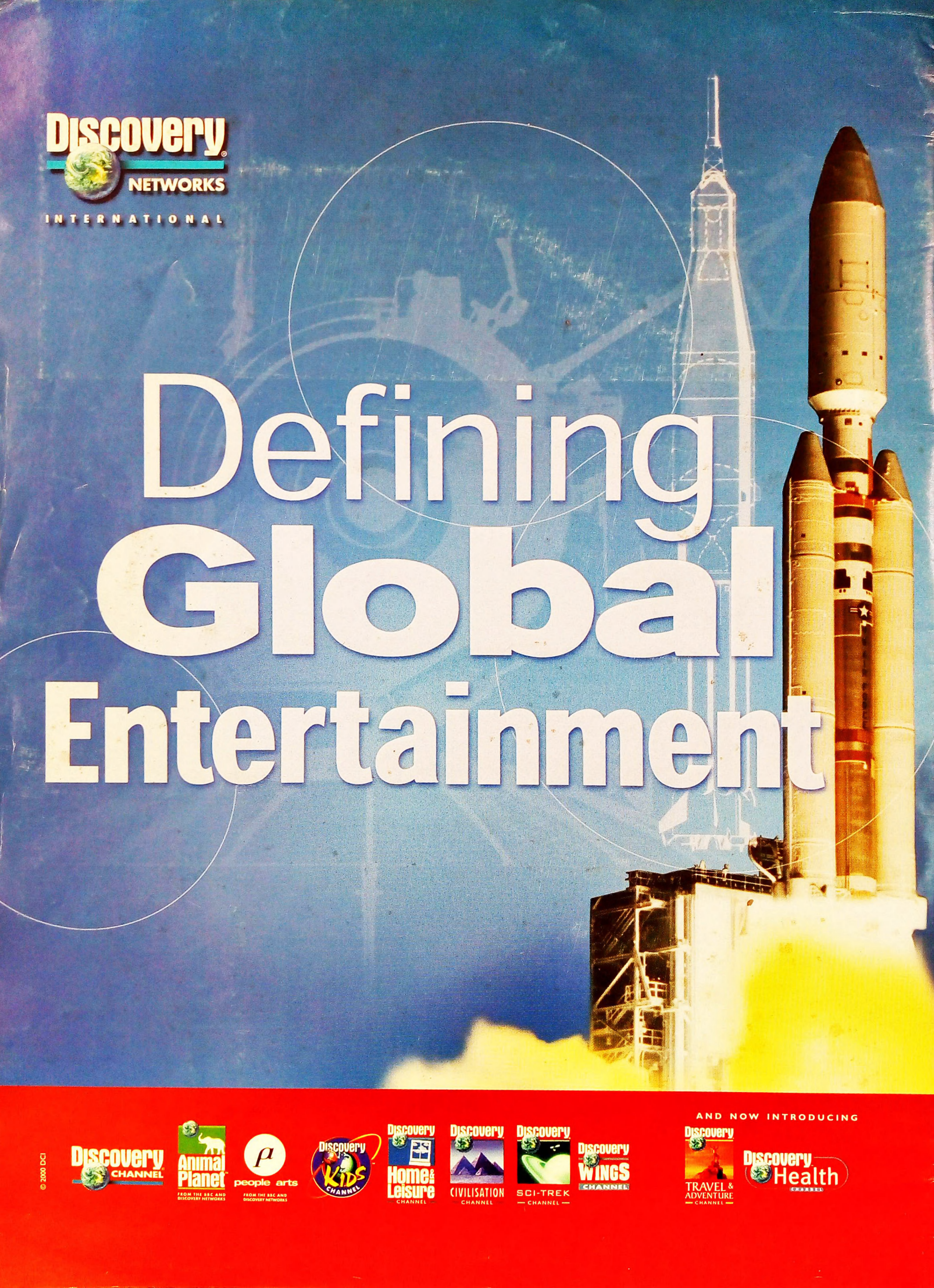
STILSON: What do you consider your chief challenges moving ahead?

KREIZ: One challenge for the company as a whole is to continue to focus on execution. We have a lot of opportunities and ideas, and we have to stay very close to delivering our business plan. We also have a challenge in integrating all our businesses. We have four lines of business that operate in every market in Europe and the Middle East, and all of that is very local. So there's a lot of integration in each of the divisions and (between) the divisions themselves.

STILSON: So what are the markets where you have yet to create a channel?

KREIZ: The only markets where we don't have channel in right now are Portugal, and then Austria and Switzerland, where we expect to be present through the German proposition. So by end of this year we expect to be almost at full distribution in every sovereign market in Europe. ■


Necesito Saber
Lo último en noticias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